

Issue #22

Winter 2022/2023



TIMES

ENTREPRENEURSHIP: YOU HAVE TO SEE

IT AND AND YOU HAVE TO DARE IT

**In conversation with Rob Wagenborg:
about growing up in a family business**

**Choices in the Wadden area: "Do you
adapt the environment on ships or the
other way around?"**

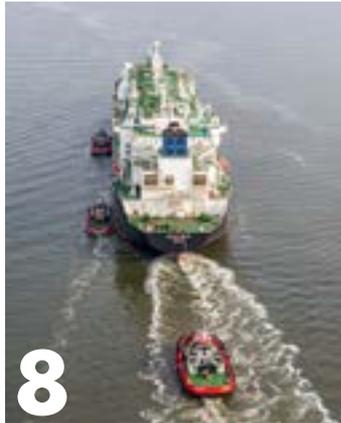


Contents #22

2

→
Cover story: Wagenborg
contributes to **LNG
TERMINAL** in Eemshaven

↓
Heavy transport &
sustainability: balancing
on a green rope according
to **JOHAN DORGELO**



JYRKI RANKI, Vice President
Marine Logistics Metsä Group:
*"We select the partners we
trust"* ↓



↑
How to keep the Canadian
Arctic safe? In conversation with
ISABELLE PELCHAT of the
Canadian Coast Guard

ROB WAGENBORG
states: Entrepreneurship is
nothing but: *"You have to
see it and you have to dare"* ↓



12 **SHIP ROUTING IN PRACTICE**

Senior Chartering Operator Matthijs
Hut tells

16 **NORTHERN NETHERLANDS PUBLIC AND PRIVATE PARTIES ARE JOINING FORCES**

24 **WHY VETTING IS OF IMPORTANCE**

In conversation with Manager
Nautical Operations Eldert Heijkoop

26 **KNOWLEDGE & EXPERIENCE**

Why shipowners opt for a ship
conversion

30 **DO YOU ADJUST THE ENVIRONMENT ON THE SHIPS OR THE OTHER WAY AROUND?**

In conversation with Director of
Wagenborg Passenger Services Ger
van Langen about choices in the field
of economic gain, social importance
and nature

34 **FROM APPRENTICE TO OFFICER**

Promotion policy within Wagenborg

40 **NORTHERN NETHERLANDS: 'SILICON VALLEY' OF SHIPBUILDING**

Interview with Harry Doze, Partner at
Marstrat

44 **FOCUS ON EXTENDING THE LIFE OF THE FLEET**

50 **THIS WAY YOU REALIZE A DEFLECTION AT A DEPTH OF 85 METERS**

52 **THE OPTIMAL MPP SHIP: SHIP DESIGN FOR DUMMIES**

Head of Design & Engineering Jack
Kuin of shipyard Niestern Sander
explains

Moving forward requires conscious choices

A maritime training, and then?



11
Mark van de Pol
Chief Engineer



20
Wilfried Boelens
Operations Manager



46
René Vogel
Captain Wagenborg Offshore



59
Daniël Waker
Superintendent

“Those who want to move forward must be prepared to make choices. As a company and as a person. That is often easier said than done. Look at entering new markets or withdrawing from countries, as we did in Russia earlier this year. We all have our habits, have grown up with traditions and our own history, live with certainties that seem to become less certain over time. There is really no need for us to say goodbye to all of that. But those who look to the future instead of the past know that progress requires conscious choices.

Making conscious, well-considered choices is central to this issue and many stories deal with the dilemmas and challenges within the logistics sector today. After all, we want to move forward. The result is a palette of possibilities in which we can only find answers and make decisions as a whole chain. Wagenborg as a supplier and our customers as ambassadors that make transport more sustainable. Safe, reliable and affordable. And with minimal CO₂ emissions of course.

In this edition of Times, Vice President Maritime Logistics Jyrki Ranki talks about the choices that ‘his’ Metsä Group is making for a sustainable supply chain. A development that is also familiar to WPD director Ger van Langen: he talks about the changing nature and environment that affects the ferry connections to Ameland and Schiermonnikoog. This continuous balancing between social interest, nature and economic reasons is also central to our conversation with Isabelle Pelchat of the Canadian Coast Guard.

However, this long-term vision is not new within Wagenborg. Former director Rob Wagenborg talks about growing up in a family business. And his conscious choice for a career in the logistic world is also reflected in more colleagues, such as Mark, Wilfried, René and Daniël.

The challenges we face as Wagenborg express the many opportunities that are available. It is a journey to tomorrow with many choices. For you and for us. I wish everyone a lot of wisdom.

Finally, I wish you and your loved ones happy holidays and a safe and healthy 2023. A safe journey for our seafarers and a good watch for our consignees.”

Egbert Vuursteen



SPECIAL BRIDGE RELOCATION IN BERLIN

In October, the bridge team of Wagenborg Nedlift carried out a special operation near Berlin. The Fahlenbergbrücke was moved there by 100 meters via a sophisticated jacking and sailing operation.

The Fahlenbergbrücke, which weighs over 600 tons and is 40 meters long, spans the Oder-Spree Canal and connects the town of Gosen with the district of Berlin-Müggelheim. The old bridge will be replaced by a new one. During this new construction, the old bridge will serve as a temporary bridge on the diversion route.

The Wagenborg Nedlift team used a combination of techniques for the relocation operation. First of all, a set of coupling pontoons with support beams on top. This created a stable surface for the jacking system that had to lift the bridge from the abutments. This jacking system was only recently taken into use by Wagenborg Nedlift. The Fahlenbergbrücke project is therefore one of the first projects for this latest addition to jacking technology. The new jacking system works with the aid of jacking elements, is equipped with the latest technology in the field of jacking technology and is computer controlled. A perfect system for jacking up a bridge such as the Fahlenbergbrücke. To release the bridge from the foundations in a controlled and safe manner, the client positioned extra jacks on both sides of the foundations.

The large number of the public was treated to a beautiful piece of craftsmanship by the bridge team. The bridge was lifted silently and lifted off the foundations with the jacking system and jacks. After the bridge was completely freed and securely secured, the pontoons slowly set in motion towards the diversion route, 100 meters ahead. What precision steering of the tugboat skippers! Once there, the client first carried out the necessary work on the supports.

The next day, the entire jacking operation took place in reverse order and the bridge was placed on the temporary bridgeheads of the diversion route. With as much calmness and care as it had started the day before.



WAGENBORG TERMINAL IN EEMSHAVEN SCENE FOR COMMISSIONING CRUISE SHIPS

Anyone approaching the Wagenborg terminal in Eemshaven cannot have missed it. An immense ship at the quay flanked by Nedlift cranes, extra parking spaces, large tents and container units, extra security and trucks driving back and forth: something special is going on here. And so it is. After an interruption of 4 years, the Wagenborg Terminal is once again the setting for the completion of a cruise ship from the Meyer Werft. In this case the 'Disney Wish' that Meyer Werft builds for Disney. And all logistics and 'arrangements' around it are arranged by the Wagenborg forwarders.

After 10 weeks of completion and commissioning at the Wagenborg terminal, the cruise ship 'Disney Wish' will leave Eemshaven in June 2022. The cruise ship 'Arvia' of P&O Cruises has now moored at the Wagenborg terminal for a comparable completion process.

FOLLOW THE CONSTRUCTION OF THE EASYMAX III WITH OUR MONTHLY JOURNAL



Many colleagues from Wagenborg and Niestern Sander are involved in the construction of our third EasyMax. To show you what is involved in the construction of a ship, we would like to give you a look behind the scenes. In our monthly EasyMax Journaal, colleagues from Wagenborg and Niestern Sander tell us what they are doing. In addition, we have created a special website on which we regularly post progress reports, photos and videos.

www.easymax.wagenborg.com



WAGENBORG TOWAGE ADDS NEW 80 TONS TUG BOAT TO FLEET

Wagenborg Towage has acquired an 80-tonne bollard pull ASD 3280 Tug designed by Robert Allen, one of the world's best tug designers. With this new tug, Wagenborg strengthens its position on the tug market in the Eemshaven and the Eems region. The tug has been given the name 'Waterlines' and is the largest tug in the fleet of Wagenborg Towage, which consists of six tugs that mainly operate in the Netherlands and Germany.

Built in 2020 by the Uzmar Shipyard in Turkey, the 80-tonne bollard pull tug is highly manoeuvrable and combines good performance with modern design. Thanks to its operational flexibility, the tugboat can be used for port and terminal operations, escort operations, firefighting operations, coastal and offshore towage operations.

After the acquisition, the ship was prepared in just a few weeks for departure to Eemshaven, where she arrived in time to assist the first LNG ships.



CONVERSION-OF-THE-YEAR AWARD FOR WALK TO WORK VESSEL 'KOENIGSBORG'

At the beginning of June, the walk to work vessel 'Koenigsborg' was awarded the 'Vessel Conversion of the Year Award 2022' during the annual Offshore Support Journal Conference in London.

This award recognizes the conversion project that has broken new ground in terms of design, construction and/or operational aspect. Wagenborg Offshore Director Edwin de Vries: "For us, this award is a confirmation of the successful intensive cooperation between Wagenborg and our yard, Royal Niestern Sander. Together we have developed the best possible walk-to-work concept with the best possible resources in the market."

DAMEN AND AMPELMANN SELECT WAGENBORG FOR FAST CREW SUPPLIER

Wagenborg Offshore has signed a contract with Damen Shipyard and Ampelmann Operations for the activities of the world's first Fast Crew Supplier. The scope of this agreement includes crew management, HSEQ and technical maintenance of the offshore vessel.

Damen and Ampelmann have joined forces to combine Ampelmann's walk-to-work expertise with Damen's experience in designing and building crew change vessels. After research, market consultation, design and engineering, the Aqua Helix was built on speculation to demonstrate the uniqueness of these crew transfers. You can only do such a pilot once. That is why it is crucial that everything works perfectly and an experienced crew is essential. That is why Damen and Ampelmann chose Wagenborg Offshore with its extensive track record with its fleet of walk-to-work vessels in the southern North Sea and crew management services.

The Fast Crew Supplier (FCS7011) is capable of continuous cruising at speeds of up to 40 knots to enable short transit times. Two motion control systems and a luxurious interior that can accommodate up to 150 people ensure a very comfortable commute. A number of marine access solutions can be selected to meet specific needs. Together with the dynamic positioning system, this enables safe transfers in conditions of up to 3.0 m significant wave height. The crew exchange vessel will soon be available from her home port of Den Helder for the offshore energy market and potential customers.

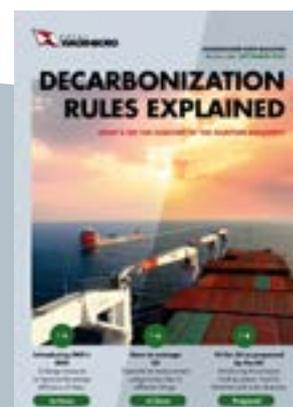


WAGENBORG INTRODUCES SUPPLIER CODE OF CONDUCT

Our suppliers play an integral role in our mission to make our business more sustainable every day. At Royal Wagenborg, we consider it a joint responsibility to develop and offer services in a responsible and sustainable manner together with our suppliers. We expect all our suppliers to support us on this sustainability journey. That is why Wagenborg is now taking the next steps to embed care for people, planet and profit in all our supply chains by introducing a code of conduct for suppliers. The code outlines both the minimum requirements and Wagenborg's ambitions for all Wagenborg suppliers.

7

NEW IMO REGULATION 'EEXI' AND 'CII' IN FORCE AS OF 2023



As of January 1, 2023, new IMO regulations will come into force within the maritime shipping industry.

The Energy Efficiency Existing Ship Index (EEXI) is mandatory for existing ships larger than 400 GT to calculate efficiency based on design data. The EEXI for existing vessels is related to the Energy Efficiency Design Index (EEDI) for newbuild vessels. If ships meet this standard, a one-time certificate will be issued.

In addition, the Carbon Intensity Indicator (CII) will annually assess the operational performance of individual vessels larger than 5,000 GT. This assessment results in a kind of energy label A to E, with a C label being the market standard.

If you would like to know more about these rules or know how Wagenborg's MPP ships score, download our info bulletin at: www.wagenborg.com/IMO





Wagenborg contributes to **LNG TERMINAL** in Eemshaven

Eemshaven. Once the land of peat and agriculture. Nowadays more and more of new energy. Not only from offshore wind energy, but since September also from LNG via the EemsEnergyTerminal, a Gasunie subsidiary. This means that the Netherlands is one step closer to independence from Russian natural gas. The terminal will run at full capacity this winter.

RECORD TIME

In full force there has been worked on the realization of the new LNG terminal. The terminal was completed in record time. About 500 employees from all kinds of parties in the Netherlands and abroad were involved. Within the space of a few days, two FSRUs (Floating

Storage Regasification Units) - the 'Golar Igloo' and the 'Eemshaven LNG' - were moored in the port in September under the agency of Wagenborg and with the help of Wagenborg tugs. Together, both FSRUs form the terminal where liquefied natural gas (LNG) supplied by tanker is turned into gaseous gas.

HOW DOES THE EEMSENERGYTERMINAL WORK?

The FSRUs: the 'Eemshaven LNG' (Exmar) and the 'Golar Igloo' (New Fortress Energy) are located in one of the port basins of Eemshaven for an initial period of five years. The incoming tankers transporting LNG in turn moor ship-to-ship against the Golar Igloo to unload. From there it can be transferred to the Eemshaven LNG. Both FSRUs can 'regasify' and inject gas into Gasunie's gas pipeline network. A natural gas pipeline and a hot water pipeline have been laid on the quay. Furthermore,

The EemsEnergyTerminal makes an important contribution to security of supply and helps the Netherlands and Europe to reduce their dependence on Russian gas.



The incoming tankers transporting LNG moor ship-to-ship against the Golar Igloo to unload. From there, the gas can be transferred to the Eemshaven LNG.



there are connecting pipes between the FSRUs for the aforementioned transport of LNG between the FSRUs. Many Wagenborg cranes assisted in the construction of all new pipelines. A new gas pipeline has been laid from the quay to Gasunie's existing network. The gas pipe is completely underground outside the terminal. And although there are physically two FSRUs, EemsEnergyTerminal will provide the services to the users as one terminal. After processing the supplied LNG, the EemsEnergyTerminal can make a total of 8 billion cubic meters of natural gas per year available for the national natural gas network.

Until this year, the Netherlands only had an LNG terminal in the port of Rotterdam. With the expansion in Eemshaven and the optimization of the terminal in Rotterdam, the import capacity for LNG will double. In the period up to December 31, 2022, Wagenborg expects to be able to receive, guide and moor multiple LNG tankers at the EemsEnergy Terminal.

A spokesman for Rob Jetten, Minister for Climate and Energy: "It is very good news that Gasunie, together with all parties involved at home and abroad, was able to realize the new LNG terminal so quickly. In addition to saving energy as much as possible and filling the gas storage facilities, the import of liquefied gas is essential for the security of gas supply in the coming winter. The arrival of the new LNG terminal is an important step not only for the Netherlands, but for the whole of Europe to completely phase out the dependence on energy from Russia as quickly as possible."

It is good news that all parties involved at home and abroad were able to realize the new LNG terminal so quickly.



Mark van de Pol
Chief Engineer MV Taagborg

"My name is Mark van de Pol. I am working for our company twenty years now. From childhood on, my father took me out to sea for fishing trips. In those days, I always dreamt about joining the navy. When a relative told me about the merchant navy and lend me some books from his nautical college, I changed my mind and after completing my pre-university education (VWO) I started the Nautical College in Flushing. During college I applied for a trainee-ship at Wagenborg and I joined MV Vechtborg in Oulu as a "Maroff-apprentice". I can still remember exactly all the ports of call from this fantastic period!

After graduation Wagenborg offered me a job and I started sailing as Maritime Officer, serving on various types of vessels as engineer and deck officer. I preferred the technical jobs above the nautical ones so I became a full-time engineer. For the past nine years I am the fixed Chief Engineer of MV Taagborg.

Besides "seeing something of the world" it is very satisfying to solve a problem with the team on board when no-one else is around. Another advantage of my job is the 6-months of holiday yearly, which I love to spend on windsurfing, barbecue-ing and cruising in my classic USA muscle car.

I'm wondering sometimes if there are other jobs around, especially during a bad weather trip when you can't have a decent rest for days sometimes. And recently our job was made really tough due to COVID restrictions and sometimes prolonged sailing periods. If there is a problem at home you may have all the modern communication systems that you want but then you realize that you are really a long way from home...

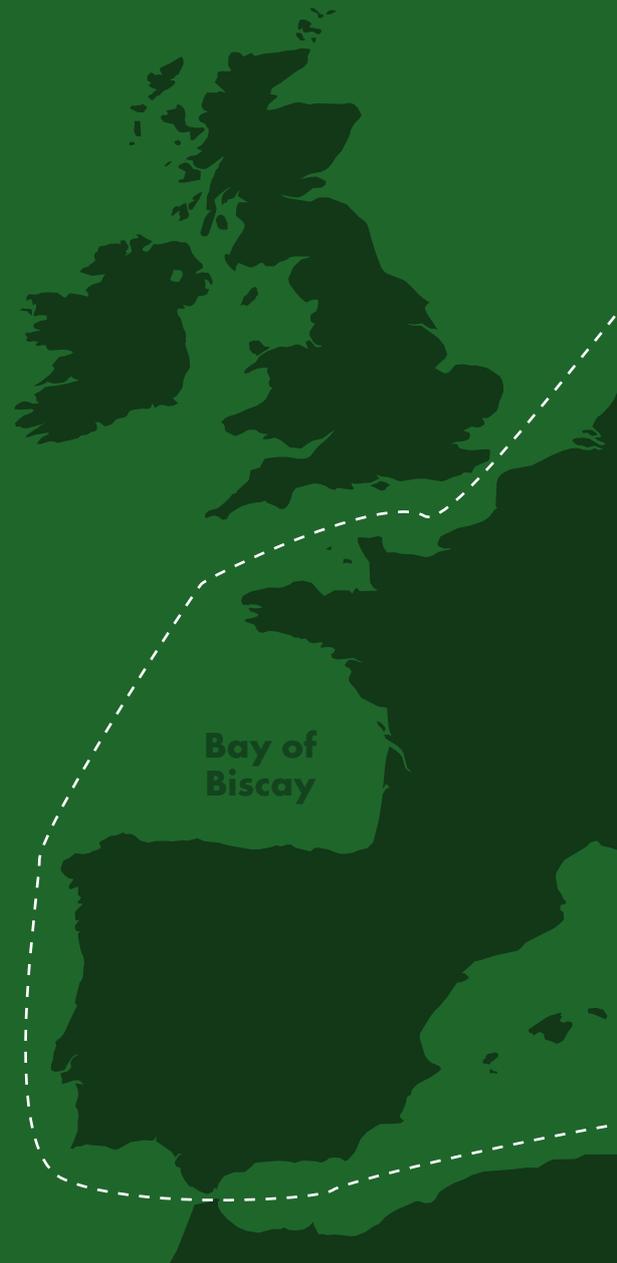
But I cannot think of another job that I would rather do."



IN CONVERSATION WITH SENIOR CHARTERING OPERATOR MATTHIJS HUT ABOUT OPERATIONAL CONSIDERATIONS.

THROUGH THE EYES OF THE **CHARTERING** **OPERATOR**

How do you determine the route of a ship if a cargo has to go from A to B? Do you choose the fastest, shortest or most energy-efficient option? Four questions to Senior Chartering Operator Matthijs Hut about the considerations made during the last voyage of the Moezelborg from the Baltic to Southern Europe.





Husum
Loading: 2 days

Kemi
Loading: 2 days

Rauma
Loading: 2 days

Vuosaari
Loading: 2 days

Nea Moudania
Discharging: 5 days

Martas
Discharging: 2 days

Limas
Discharging: 2 days

Mersin
Discharging: 4 days

Iskenderum

As a Chartering Operator, I keep an eye on the entire journey to make sure everything is still going according to plan. I have regular contact with the captain for this, consult with the agent in the next port and keep the customer informed. The live data that we receive from the ships, for example about the location and speed, also help me with this.

1

Do you know in advance exactly where a ship will pass and when it will be there?

"Unfortunately it's not that simple. When a cargo is closed, we know where a ship has to go and how long loading and unloading is expected to take. In the case of the Moezelborg, we had to load in four different ports in Finland and Sweden and then discharge in five Turkish and Greek ports. Based on this information, we made a plan and determined a route. The starting point is often the shortest route, but we also look, for example, at weather forecasts, ice formation and whether, given the planning, it is necessary to use passages for which we have to pay. This is not always easy to predict, which is why, as a Chartering Operator, I keep an eye on the entire journey to make sure everything is still going according to plan. I have regular contact with the captain for this, consult with the agent in the next port and keep the customer informed. The live data that we receive from the ships, for example about the location and speed, also help me with this."

2

Is faster always better?

"No definitely not. It is a fact that the faster you sail, the more fuel a ship consumes and the more CO₂ you emit. We therefore try to avoid unnecessary fast sailing at all times. It is therefore important to know when you can go to a port to load or unload. For example, many ports do not work on weekends and public holidays, so it makes no sense to enter a port on a Friday evening. Then you better sail slower. In the case of our first unloading port in Limas, Turkey, I know that if customs formalities are completed on Friday, unloading will take place over the weekend. I therefore coordinated with the captain that it is feasible to be in Limas on Friday morning, in the end this became around noon and the ship unloaded neatly during the weekend. In addition, the colleagues of Holland Hellenic regularly consult with the shipping agent on site during the trip to see whether it is still wise to arrive on Friday. For example, is there a free quay, is there a warehouse available to store the unloaded goods, and in these times also increasingly a challenge: is there enough personnel to load or unload a ship?"

→
 After loading in four different ports in Finland and Sweden, MV Moezelborg is on her way to discharge in five Turkish and Greek ports.



3

Did the weather affect this trip?

"In the autumn and winter we often encounter challenging weather conditions: wind, waves, currents and swell, which our captains in particular have to anticipate. The Bay of Biscay can be challenging all year round and is often a benchmark after which we often evaluate our aligned ETA. If necessary, I will call in the help of our Nautical Superintendent Frank van der Anker or Supercargo Siep Willemsen. They have a special simulation program with which they can predict the position of the ship and the weather on site even more accurately, but these are of course still expectations. The captain decides, he is ultimately responsible, but it can help if several eyes look at the weather forecast. In the future, as an operator, we will also gain even more insight into data at the office with the development of Bridge, which I am also involved in for the operations module. With access to more data, we think we will be able to make even better and well-founded decisions together in the near future."

4

How did the planning of the Moezelborg voyage work out?

"The Moezelborg arrived in Limas on Friday morning and the first part of the cargo was indeed unloaded there over the weekend, so that the ship could quickly get back on its way to the next ports in Martas and the Greek Nea Moudania. A ship was already docked in Nea Moudania, so we had to wait outside until this ship was ready, unfortunately people really don't work in Nea Moudania without ordering overtime. I have decided to order the overtime for the weekend so that we can load well in time for our next trip back to Rotterdam. Problems did arise at the following ports. A container ship has sunk in Iskenderium. As a result, the waiting times for the ships in that port are long, and due to evading ships, this also applies to nearby Mersin. We would unload in both ports, which would take us 1.5 weeks. Fortunately, we knew this in time and agreed with the recipients of the cargo in Iskenderun that we will also unload this cargo in Mersin. This could just save us a week's worth of time just for this trip!"

Shortage in the labor market

16

Northern Netherlands

**PUBLIC AND PRIVATE
PARTIES JOIN
FORCES**

Last year, 12 parties signed the Integral Agenda Eemsdelta, including Egbert Vuursteen (CEO Wagenborg). These signatures marked the beginning of a special collaboration between employers, education and intermediaries to allow the region in the Northern Netherlands to flourish further, so that we can continue to have sufficient workers in the future. Meanwhile, quartermaster Riek Siertsema is busy shaping this initiative.

"The Eemsdelta region is facing an interesting challenge. There are many vacancies open, at the same time we know that many employees will retire in the coming years. As an employer, you can then advertise a vacancy and create a great campaign for it, but that does not always result in good new colleagues. Circumstances outside work are at least as important", kicks off Riek Siertsema, quartermaster Integrale Agenda Eemsdelta. *"For example, are there houses for sale in the region for first-time buyers? Is there a nice school for the children? Or, if someone's knowledge is not yet in line with what is being asked, are there trainers in the area to change this? In short, you cannot solve the shortage of labor on your own. It is about the total picture of working, learning and living. That is why it is so important that public and private parties have jointly made the choice to join forces here."*

JOINT VISION

A joint vision of what the region should look like in 2030 is, according to Siertsema, essential to bring the project to a successful conclusion. *"It is a large and extensive project with many different stakeholders. A joint vision makes it clear what you are all working towards."* The story that the Noorderpoort College and the Eemsdelta Collaborating Companies drew up after

consulting various stakeholders forms a good basis as far as Siertsema is concerned. A few passages from that story illustrate the ambition well:

"In 2030, the Eemsdelta industrial area will be known for its interesting, international projects that make a significant contribution to a better and sustainable future. The innovative solutions resulting from the good cooperation between the knowledge institutions and companies are publicly appreciated within the broad international industrial sector. For those who are longer connected to the industrial area, the area is easily accessible. But in the area itself it is also attractive to settle; it is pleasant and inspiring to live there because the most modern techniques and developments make life pleasant for young and old."

You cannot solve the labor shortage on your own. It is about the total picture of working, learning and living.

FLYWHEEL

The campus that is currently being built in Appingedam plays an important role in this vision of the future. Secondary Education and Noorderpoort College are now teaching there, but more is needed to become that innovative, sustainable region. Siertsema: *"The business community must join in, innovative start-ups must be given a place, just like higher professional education and PhD students from the RuG. If it's up to me, there will also be satellite locations, such as the Maritime Academy and the Care and Offshore Wind expertise centers. Then it really becomes a breeding ground for innovations."*

Furthermore, four working groups are currently being formed: education and the labor market, care, housing and quality of life and the image of the region. Each working group will work on its own theme. What is already happening in this area and what still requires additional effort to become who we want to be in 2030? During an initial inventory, Siertsema discovered that there are already many good initiatives and ideas within these themes. *"Take education and the labor market. All kinds of projects are already running, such as the VMBO program Strong Technology Education, the RuG initiative University of the North and the Innovation Workshop of Hanze University of Applied Sciences. Often people do not know at all that they are working towards the same goal. By bringing people and ideas together, you get a flywheel effect."*

**EGBERT VUURSTEEN**

ROYAL WAGENBORG

"As one of the larger employers, Wagenborg plays an important role in the region. We also have a responsibility to that region. We are therefore happy to contribute to the quality of life and well-being of the people here. Of course we also have an interest in this cooperation. We have the ambition to make our company a bit more sustainable every day, for current and future generations. For this we need professionals in the broadest sense of the word. In the current tight labor market, we have found that it is sometimes difficult to find the right people. The intention to allow talent in the region to continue to flourish and to retain it for the region therefore appeals to us. In addition, the sustainability issues require innovation, in which we may be able to seek cooperation with the campus."

**FRANS ALTING**

STICHTING BEDRIJVENVERENIGING EEMSDDELTA

"SBE stands for a good business climate in the Eemsdelta. A healthy labor market is part of this. We are not going to solve the labor shortage with the traditional cooperation between education and companies. The shortage is becoming structural and is actually in all sectors, which is why the government, education, healthcare and the business community must work together to create an attractive region where it is good to live, work and learn. I expect that we will take up very practical things with impact that contribute to that attractive Eemsdelta, starting with the new Campus in Appingedam and a powerful story about this area. These two things should become a flywheel for other ideas, projects and parties. We have many ideas about what we can do further and are involved in all kinds of consultations to concretise the plans. We also try to involve as many companies as possible in this."

**CAS KÖNIG**

GRONINGEN SEAPORTS

"The relationship between education and business is becoming increasingly important. There is a great demand for well-trained personnel and practical experience plays an important role in this. That is no different in the municipality of Eemsdelta, and therefore at Groningen Seaports. The Eemsdelta has an enormous amount of potential and it is very important to jointly exploit these opportunities. These matters come together with the Integrated Agenda Eemsdelta. Groningen Seaports, together with the other partners of this agreement, wants to fascinate and bind young talent to the region. We do this, among other things, by receiving and showing around large groups of students, from primary school to university. In addition, we have an average of 25 trainees and graduates per year. We are also committed to teaching lessons in our ports. In this way we want to show the youth how cool it is in the ports and industry. This is where a contribution can be made to the necessary transitions."

FLEET MUTATIONS

In recent months multiple vessels within the Wagenborg fleet have changed ownership and were given a 'BORG'-name.



Isis >>> **NECKARBORG**



Imke >>> **NEUSEBORG**



Dagna >>> **NIJLBORG**



Helenic >>> **EIKBORG**



Alana Evita >>> **IEPBORG**



Sprinter >>> **OHIOBORG**



Daan >>> **JALONBORG**



Panta Rhei >>> **PLATAANBORG**

Wilfried Boelens

Operations Manager

"I was 6 when I saw a captain disembark. From that moment on I knew what I wanted to be. In 1979 I stepped on board for my internship at Nedlloyd. We were away from home for twelve months, sailed around the world twice. I loved it. When it was time to disembark, I stood on the gangway crying.

After the nautical school I was able to work as a 4th mate at Nedlloyd. I was away from home for six months. When I got a girlfriend, I thought that was a very long time. Via a few other shipping companies I ended up at Wagenborg in 1989 as first mate on the Baltic Link. Not much later I became captain.

In 1995 I made the transition to an offshore cable-laying vessel. We laid cables all over the world until the company went bankrupt. I returned to Wagenborg as captain on the Antarcticaborg in Kazakhstan. After four years I was ready for a new challenge and returned to the cable world, first at Five Oceans Services, later taken over by Siem Offshore. There I had a shore job for the first time, as Marine Manager in Kuwait and Saudi Arabia. I spent five weeks there in the office and in my hotel. That didn't make me happy, so I started working on board as an Installation Manager and worked partly as a Project Manager in the office.

In 2013 I really hung up my seamansbook. Wagenborg called to ask if I wanted to help developing the walk-to-work vessel Kroonborg. I didn't have to think long about that. I had seen a number of times with others that you are very far away on board when someone is sick or dies. In addition, the charm of sailing – not being accessible and being totally dependent on each other – has diminished for me with the advent of telephone and internet. And besides, it was a nice challenge. As a captain you have a lot to say, but only on your ship. I think it's nice to be able to think about the course of the company now. I am still board regularly. When I see that everything is going well, that people are proud of their ship, I think that's wonderful. Sailing myself, that is no longer necessary for me."



HEAVY TRANSPORT & SUSTAINABILITY:

BALANCING ON A GREEN ROPE



Large equipment, horizontal, vertical and heavy transport are typical for the work of Wagenborg Nedlift. This seems to be in heavy contrast to the steadily growing focus on sustainability. But is that true? Johan Dorgelo, Commercial Director, explains.

LIVABLE PLANET

At first glance, it seems to contradict each other: sustainability and heavy transport. Nevertheless, a green thread is woven through all of Wagenborg Nedlift's activities. In the first place from an intrinsic motivation to keep our planet livable for future generations. Secondly, because we have to deal with laws and regulations, including at the locations where we work. "Think of construction sites without noise and odor nuisance for local residents. Or to inner cities with a zero-emission policy," Dorgelo explains. "What matters now is green (construction) services with as little impact as possible on people and the environment. Sustainability has therefore become an important strategic factor."

**INVESTING IN SUSTAINABLE EQUIPMENT
MAKES SENSE**

Wagenborg Nedlift's sustainability strategy contains concrete objectives. These targets have been set up to the year 2050. One of the most important targets is to reduce CO₂ emissions. "We want to reduce the emissions of our crane and vehicle fleet significantly in the Netherlands and within Europe. And yes, that is quite a challenge," Dorgelo confirms.

GREENING THE FLEET

"Wagenborg Nedlift's aim is to always meet the highest achievable sustainability standard at the moment," continues the Commercial Director. "In recent years, our priority has therefore been to rejuvenate and green the fleet. For example, we have drawn up a rejuvenation plan for our fleet together with Liebherr."

In recent years, our priority has been to rejuvenate and green the fleet. For example, we have drawn up a rejuvenation plan for our fleet together with Liebherr. 25 new Liebherr machines will replace older mobile (tower) cranes in the period from 2021 to 2025. ↓

Replaced 25 new Liebherr machines older mobile (tower) cranes in the period from 2021 to 2025."

Liebherr cranes are equipped with ECOdrive and ECOMode technology as standard. This limits fuel consumption and noise nuisance while driving and during hoisting activities. In addition, these engines are extremely suitable for HVO (Hydrotreated Vegetable Oil) fuel. HVO is a synthetic biodiesel made from used cooking and frying fat. This fuel realizes an 87% saving in CO₂ emissions compared to fossil fuel.

EXTRA STEP(S)

Dorgelo: *"Within Wagenborg Nedlift we are always looking for the balance between sustainability and commercial feasibility. This means that the choice does not always fall on the purchase of new equipment. For example, we recently opted for an extensive overhaul for our Sennebogen crawler cranes, in which these machines are equipped with Euro 6 engines. As a result, they can now run on HVO fuel. And we have purchased power packs for the articulated telescopic cranes, so that these cranes can now be used fully electrically even in rural areas."* Inner-city projects are faced with increasingly stringent requirements. Nevertheless, the working environment often does not yet meet all the preconditions to be able to carry out hoisting



**Thanks to power packs,
articulated telescopic
cranes are fully electric,
even in rural areas.**

Within Wagenborg Nedlift we are always looking for the balance between sustainability and economic feasibility.



activities fully electrically. But a handy solution has also been devised for this. If the power supply at a location is not sufficient, the new battery trailer comes in handy. With this enormous power pack, the cranes can run fully electrically for 8 hours, so clean and without noise nuisance.

FOCUSED ON THE FUTURE

When deciding whether to invest in new equipment or an upgrade, we always look at the longer term. The cranes in our fleet will still meet current requirements in 15 years' time. We use a term of 12 years for our trailers and semis and eight years for our trucks.

Sometimes sustainable choices made earlier in the chain also have positive effects for the company. Steel products are nowadays produced more and more sustainably. As a result, the cycle from the production of a crane to its recycling at the end of its life has become more sustainable. This also makes a machine as a whole more sustainable.

WHAT'S IN IT?

"In our work we often have to deal with environmental zones and the associated requirements," says Dorgelo. "We regularly work on Maasvlakte 2, for example, where only vehicles with Euro 6 engines have access. Because we now have, among other things, the latest Liebherr mobile cranes in the 500 ton and 700 ton class, this is no longer a restriction for us: our project resources and equipment can be used anywhere." In short: a sustainable investment policy pays off for people, the environment and continuity.



WHY VETTING IS VALUABLE

Customers or their customers increasingly choose to engage a vetting company before entrusting their valuable cargo to one of our vessels. Such a vetting company checks the quality of our organization, services and ships. That means another check that costs us a lot of time and energy, in addition to, for example, the checks of Flagstate, Portstate and Class. Nevertheless, we are happy with this extra check. Nautical Operations Manager Eldert Heijkoop explains why.



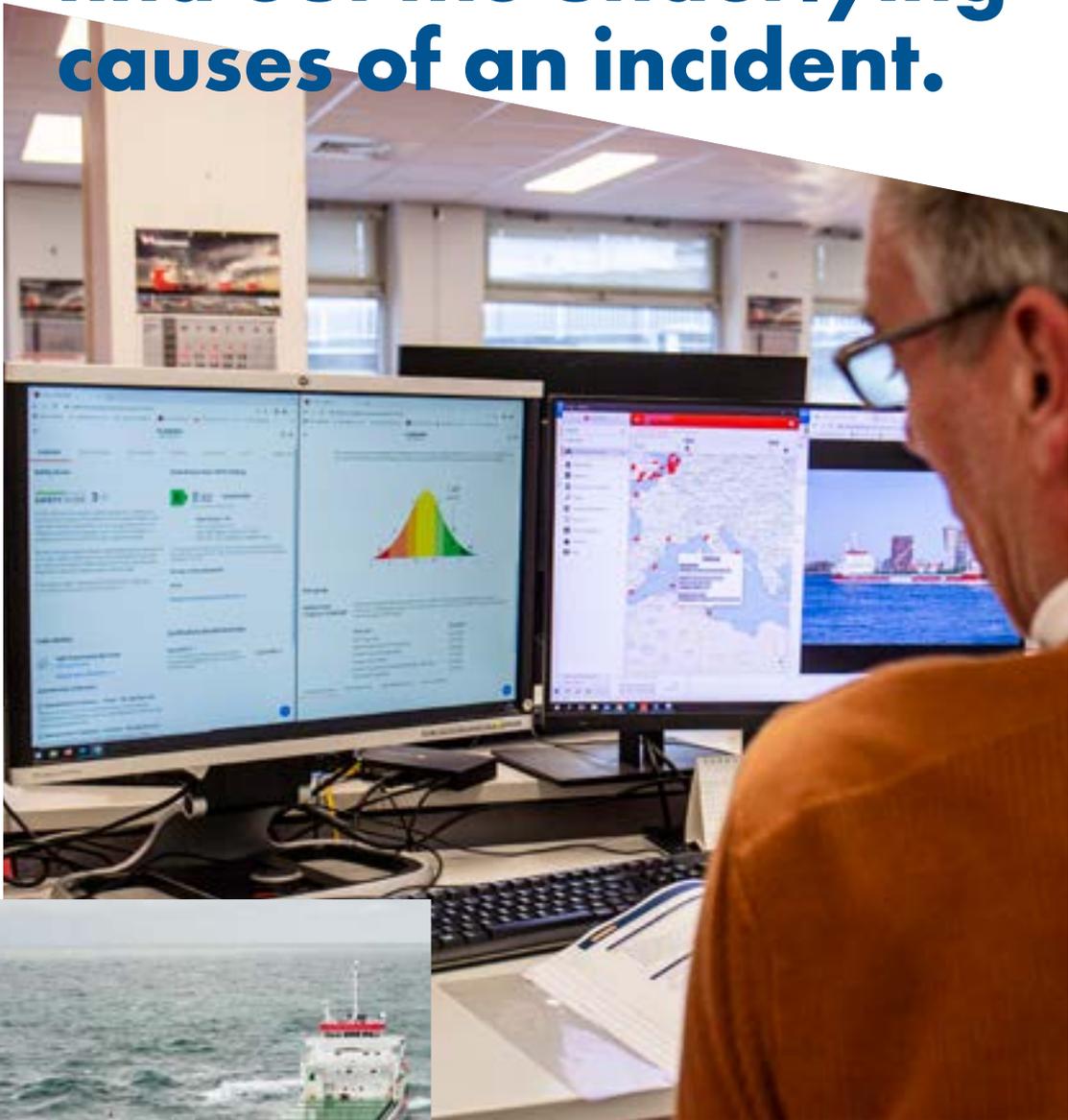
Heijkoop: *"Vetting organizations like RightShip go a step further than other agencies. They go*

deeper into causes, ask questions to find out the underlying causes of an incident or deviation. These are often the questions that are more difficult to answer. When these questions are asked by colleagues, there is not always an answer. RightShip keeps asking until such an answer is on the table to help us learn from it. In this way they lift our incident investigation to a higher level and we can improve our quality level even further. That is why we have been an official Member of Rightship for a year now."

While vetting has been common practice in the tanker world and offshore industry for years, it is still relatively new in the world of general cargo. For the Wagenborg colleagues, this requires a switch in thinking and acting. "We are busy instructing colleagues to complete General Reports according to RightShip's requirements; to immediately record information properly and to take an even more critical look at incidents and possible underlying causes. This is how we try to anticipate RightShip's questions. That is not always possible, but we also learn from that: next time you will ask those questions yourself." All efforts pay off. Last year, 67 of the 70 applications were approved.

Heijkoop still sees a disadvantage of the current checks. "Vetting organizations often use the same guidelines for all ships. That is not always logical. Our 10,000-tonners cannot be compared in many respects with 200,000-ton bulk carriers. An example: RightShip automatically places ships older than 14 years and can carry more than 8,000 tons in the relatively low class 2 until the ship has been physically inspected. Our ships sometimes call at 50 ports a year and are inspected that often. Then you may wonder whether that class 2 classification is justified. That is very different from large bulk carriers, which sometimes only call at 5 ports in a year. It would be nice if that distinction were made, because basically we are very happy with the extra pair of eyes from the vetting organizations."

They go deeper into causes, ask questions to find out the underlying causes of an incident.



We are busy completing General Reports according to RightShip's requirements; to immediately record information properly and to take an even more critical look at incidents and possible underlying causes. This is how we try to anticipate RightShip's questions.

WHY SHIP OWNERS OPT FOR A SHIP CONVERSION?

KNOWLEDGE & EXPERIENCE

Ships do not live forever. Certainly not given the current developments in the field of customer requirements, legislation and sustainability. That is why shipping companies regularly choose to convert their ships. This requires a shipyard with capacity, knowledge and experience. Here we highlight seven projects where ships have been given a second life by Royal Niestern Sander.

Royal Niestern Sander is not just a shipyard. Equipped with new-build facilities, a number of dry docks and a well-equipped workshop, a shipowner consciously opts for the total solution of Niestern Sander. The Groningen yard has more than a century of experience with various types of ships, as practice shows. Whether it concerns the renewal of old ships, the refurbishment of existing ships or the conversion to new technical and functional requirements. A customer-specific design is made. Then the engineering takes place. Customization at its best. In short, a yard where customer demand comes first.



From PSV to Walk to Work vessel

Kasteelborg

The Blue Queen arrived in Delfzijl from Norway at the end of 2017. This standard PX121 Platform Supply Vessel (PSV) was then shaped in 12 weeks by the Dutch shipyard Royal Niestern Sander, on behalf of Wagenborg Offshore. Converted into a dedicated Walk-to-Work Emergency Response and Rescue Vessel, the PSV – renamed Kasteelborg – was delivered on schedule in March 2018. It was a challenging conversion project in which time and planning played a major role.





Extension of the ship by 11 meters

Rotra Mare

Due to the increasing height of wind turbines, transport ships must be made suitable for the transport of this next generation of wind turbines. Commissioned by Holland Shipyards Group, Niestern Sander worked on the conversion of the 'Rotra Mare'. The Rotra Mare of 141.6 by 20.6 meters was extended to a ship of 152.7 meters.

Niestern Sander built a completely new section for the extension. To accommodate this, the existing ship was halved in the floating dock in Delfzijl. The bow was towed out of the dry dock, after which the new section was placed in between. This section was first adapted to the stern in the dry dock, after which the dock was lowered for the attachment of the bow.

The Rotra Mare was back in service in early 2022.



Münsterland

AG Ems' passenger ship Münsterland will be converted from conventional propulsion to full LNG propulsion in 2021.

For this purpose, the old stern of the bow was burned off and replaced by a newly built stern. This completely newly designed and built stern contains dual fuel engines, an LNG storage tank, propulsion, all LNG installations, pipes and other systems.

Niestern Sander's project approach relied on both shipbuilding and ship repair. The major part of the conversion operation physically took place at the shipbuilding yard, after which parts were assembled in the repair dock to form a completely renewed ship.



From conventional fuels to LNG

Yed Prior

Spaansen approached Niestern Sander for the conversion of the Yed Prior, then still a container ship called GERD, into a gravel suction hopper dredger. For this purpose, the ship was put dry to carry out a number of defined tasks, such as the installation of spud pole transits, 8 bottom valves, slide guide, jet water suction, a completely new bow thruster installation, inspection of the rudder, propeller and propeller shaft. The ship has also been completely stripped of all old paint layers by means of hydrojetting.



There was also a number of unforeseen damage to the skin of the ship. After the ship was completely painted in the characteristic "Spaansen red" colors, it spent a period at the terminal where further work was carried out, such as the installation of large filter installations and, very special, a conveyor belt on the bow of the ship with which the ship can transport its load can be unloaded at a distance of approximately 40 meters from the quay. The entire project was delivered without further incidents to a beautiful end result.



From container ship to gravel dredger



From supply ship to seismic research vessel

Harrier Explorer

In 2007, Niestern Sander started converting the Harrier Explorer for Seabird Exploration. The supply vessel has been converted into a seismic research vessel. The existing accommodation has been widened on both sides of the bridge to the entire width of the ship. This created spaces for technology, fitness, recreation and conferences. A new accommodation block with 14 cabins and an examination room was installed behind the existing structure. The existing accommodation was completely stripped, as was the command bridge. Here all equipment was replaced and expanded. Furthermore, a new galley was fitted out for 60 people. Furthermore, a hangar of 40x20x10 meters has been placed on the aft deck. Winches and hydraulic equipment were placed here to tow and take aboard seismic equipment. Invisible to the outside world was the extensive work that took place inside the ship. A total of 325 tons of steel was processed; one of Niestern Sander's largest renovation projects.

Arctica 1 and 2

Royal Niestern Sander was approached for a complicated conversion of two dry cargo vessels. The 'Arctica 1' and 'Arctica 2' had to be converted for use in extreme winter temperatures and conditions. The conversion of the 'Arctica I' and 'Arctica II' was divided into three phases. To make the ships suitable for polar waters, Niestern Sander first started with a design and engineering process. After that, the existing bow was replaced by the newly designed arctic bow. For this purpose, both ships were put dry in the docking facility, the existing bow was removed over a carriage system and the new one put back in place. Finally, new deck cranes were also installed. Parts of the existing hull were removed on the starboard side to make room for the necessary crane foundations. Mechanically and hydraulically, Niestern Sander had to make all kinds of adjustments to both vessels, such as tank heating to prevent ballast water from freezing, in order to be able to install these cranes. The cranes are designed in such a way that they can be used at temperatures down to -40°C.



General cargo ship for operations in polar waters

Arctic Sunrise

Over an intense nine-month period, Royal Niestern Sander Shipyard rigorously overhauled the Arctic Sunrise in a refit project. During the extensive overhaul, almost all accommodation and work areas of this Greenpeace ship were renewed, so that the ship can serve for at least another 15 years. Before this, the ship was docked at the yard for a few weeks. During this period, the existing midship part was removed from the ship and replaced by new parts that were made in the meantime by the new construction department. The existing accommodation has been completely stripped, except for the wheelhouse. All lower quality steelwork has been replaced. Cables have been renewed

and new ventilation shafts have been installed. After a new coat of paint, the ship was ready again.



Refit accommodation and work areas for additional 15 years of loyal service



IN CONVERSATION WITH DIRECTOR OF WAGENBORG FERRY SERVICES GER VAN LANGEN
ABOUT CHOICES IN THE FIELD OF ECONOMIC GAIN, SOCIAL IMPORTANCE AND NATURE.

DO YOU ADJUST THE THE VESSELS OR THE

Wagenborg Passagiersdiensten (WPD) maintains the ferry service to the islands of Ameland and Schiermonnikoog in the eastern part of the Wadden Sea. On paper a simple task to transport travelers and goods with a ferry according to a timetable to and from these islands. Nevertheless, the reliability of this ferry connection has come under pressure in recent years.

"With the most beautiful ferry service in the Netherlands!": with this familiar announcement about how his journey from Schiermonnikoog to the mainland went, Ger van Langen enters Wagenborg's head office for an interview with TIMES. Van Langen has been active at Wagenborg since 1998 as director of the ferry service to Ameland and Schiermonnikoog and lives on the island himself. "In retrospect, the best I could have done to understand how much the ferry service interferes with daily life on the islands," says Van Langen. "The ferry service has been the lifeblood of the islands for many decades; about 90% of the islands' economic value comes through the ferry service. Think of the impact of tourism on local businesses and the hospitality industry. We also serve the social interest as the lifeblood of the community."

WORLD HERITAGE

Since the beginning of the last century, Wagenborg has been carrying this ferry connection to Ameland and Schiermonnikoog. The service has been privatized since the mid-1980s. The Dutch government has awarded the exploitation of the ferry service to Wagenborg via a concession. The current concession dates from 2014 and has a term of 15 years. Van Langen: "In recent decades, people have taken various actions that have a major impact on nature in the Wadden Sea World Heritage. Closing off the Zuiderzee and Lauwerszee has greatly reduced the 'rinsing effect' caused by low and high tide, the Second Maasvlakte influences the current along the entire Dutch coastline and overfishing has flattened sandbars. Gradually this results in such strong



Recent soil research shows that with the current ferries and fast service it is becoming increasingly difficult to navigate the fairway safely, especially at low tide.

ENVIRONMENT ON OTHER WAY AROUND?

sedimentation that without continuous human intervention the Wadden Sea will probably no longer exist within 30 years."

RECENT INVESTIGATIONS

The fairway to the islands has been the subject of considerable discussion in recent years. "One of the agreements within the concession is that Rijkswaterstaat must keep the fairway in order with sufficient draft and width. Today, two ships are dredging continuously to keep the channel passable. It turned out that the same sand was washed back into the fairway three days later, so it was an endless exercise." To offer some solace, a number of solutions were decided within the Open Plan Process in 2015 that should provide relief for the connection. Van Langen: "We have already made a cut in the timetable to make up for delays and fortunately the Vloedgeul has been cut through to realize a shorter navigation channel. However, recent soil research shows that with the current ferries and fast service it is becoming increasingly difficult to navigate the fairway safely, especially at low tide."

NEW TRANSPORTATION CONCEPT

On an annual basis, WPD transports around two million people and 200,000 vehicles to and from the islands. "The current resources and ships still perfectly meet the transport needs, but no longer meet the circumstances. So we have a choice: do we continue to adapt the environment to our ships or do we choose to adapt the ships to the environment? We have chosen to get started with a new transport concept that can serve both sides."



Without human intervention, the Wadden Sea will probably no longer exist within 30 years.



It is important for the environment, the local communities and the economic importance of the islands to work on a future-proof and sustainable logistics concept.

It is important for the environment, the local communities and the economic importance of the islands to work on a future-proof and sustainable logistics concept. *"We cannot develop this on our own," says Van Langen. "We naturally involve our stakeholders in our initiative, including five different ministries, two provinces and four municipalities as decentralized authorities, the consumer platform and about 26 different interest groups."*

ALTERNATIVE SOLUTIONS

The urgency of the situation in the Wadden Sea is evident from the fact that the Dutch government has initiated a 'Long-Term Solution Study' in The Hague. Through this research, possible alternative solutions for the connection between the mainland and the islands will be identified. This gives direction to a future concession. Van Langen: *"There are roughly three solutions for the time being: optimizing the current situation, relocating the port and a tunnel under the Wadden Sea. This last option has actually been swept off the table immediately by the islanders who want to remain an island. Furthermore, I do not see it happening that the harbor of Holwerd will be moved to Ferwerd, which is now a protected bird breeding area. This means that we will have to look at how we can make the current connection as optimal as possible. That is why we have a connection with*

the University of Groningen when it comes to a socio-social mobility analysis, the maritime research institute Marin conducts research into the morphological situation for us and we recently entered into a collaboration with Urgenda for research into an optimal logistics freight transport concept."

URGENDA

Urgenda is the organization for innovation and sustainability that wants to make the Netherlands sustainable more quickly, together with companies, governments, civil society organizations and private individuals. In the coming year and a half, Urgenda will be working for WPD on the question of what freight transport will look like in the future. *"Every day there are many trucks on our ferries to transfer daily goods such as milk, groceries and linen for the hotels. These trucks consist of chassis, wheels and the like; in my opinion unnecessary space (and weight) on the ferry. Can't we do this differently? All in all, many questions, challenges and developments. I am therefore pleased that we recently welcomed our new Innovation Manager Rogier Havelaar to combine all the research results and expectations of our stakeholders in a future-proof and sustainable logistics concept. Plenty of choices, now decisions to make!"* concludes Van Langen.

We are working on a new transport concept.



FROM APPRENTICE TO AN OFFICER

It is not uncommon for a captain on a Wagenborg ship to start working for the company as an apprentice, and that is no coincidence. The entire crew policy is aimed at internal progression, from student to officer. This way we can convey our standards and values, they get to know the trade and the ships well and they stay motivated. But how do you decide that someone who sails around the world is ready for promotion? Senior Crew Manager Mark Hoving tells.

"It all starts with the STCW, the 'Standards of Training, Certification and Watchkeeping' made mandatory by the IMO," says Hoving. "These are the minimum requirements that all seafarers must meet. Depending on your education and nationality, you can work up to a certain rank. Only when you have achieved the minimum mandatory sailing time and have completed mandatory additional training according to the STCW and in some countries have also taken an extra exam, can you obtain your doctorate."

PERFORMANCE REPORTS

But meeting these requirements alone is not enough at Wagenborg. The assessments in a 'Performance Management System' are at least as important. When a crew member disembarks, the captain prepares a Performance Management Report. In this he gives the crew members an assessment for a number of themes that we consider important at Wagenborg, including leadership, cooperation and working safely. In addition, there is a comment field in which the captain briefly describes whether he/she believes whether someone is ready for promotion, whether there are points for improvement and whether he/she has any other comments.

The reports may be critical, but must always be aimed at improvement, Hoving emphasises. *"For example, a report can lead to someone doing extra training or having to gain even more experience with certain activities. If a captain indicates that someone is ready for promotion, we often let that crew member sail with another captain for the next period to see if he agrees."*

The 'Performance Management Report' is also always shared with the crew member, so that the crew member also knows where he stands and what still needs to be worked on. *"That assessment never really comes as a surprise," says Hoving. "There is also consultation in the meantime, so that a crew member knows what is going well and what still needs to be improved during the period on board."*

INVESTING IN PEOPLE

Potential capacities are already looked at when selecting students, whether someone has what it takes to grow. In addition, Wagenborg invests a lot in the training program on board. The numbers show that this method works. No less than 85 percent of the Chief Engineers, Chief Officers and Captains on board the Wagenborg ships come from their own training.

"For example, students have to hand in a Wagenborg work list every month, so that we can see what they are doing on board. If we then see that the work is too monotonous or not focused on development, we contact the mentor on board. Furthermore, Dutch students have to do assignments for school. Think, for example, of making a trip plan or a report on what ice navigation involves. We let Vietnamese and Filipino students do the same assignments, which they hand in to us. In addition, a student writes a self-evaluation every three months. We really invest in our people and people invest in themselves. That works."



No less than 85% of the officers on board the Wagenborg ships come from their own training.



Mae Kristyl Madjus started sailing as an apprentice for Wagenborg in 2012. Ten years later she joined MV Merweborg in Latvia as the first female Filipina Chief Officer on the Wagenborg fleet. An exciting step and a promotion she had been looking forward to. "I want to show all Filipino seafarers that they can achieve their goals in the maritime industry. If you put your mind to it, you can make it happen."

"I started as an apprentice for Wagenborg in 2012, and I enjoyed every minute of it. After my apprenticeship I joined the company as a 3rd mate, and after gaining enough experience I started sailing as 2nd mate. During my entire career my colleagues were supportive and they never stopped motivating me. There is a wealth of knowledge on board of the fleet, if one just asks and listens. They ensured that I constantly honed my skills, learned new ones and gained experience. Still, I never thought they would offer me a promotion to become a Chief Officer. It's a big step and comes with great responsibilities.

The day I was offered the job was one of the happiest days of my life, although it also made me a bit nervous. The pressure of being a Chief Officer was certainly weighing down on me. I had worked for it and felt confident in my abilities, but there were still some uncertainties and doubts. How would I handle under pressure? Would I be able to handle all the different personalities on board?

So many questions, so much uncertainty! And yet... I accepted. It was time to go for it – time to take that opportunity and accept this amazing job and logical next step. It is not just about being good at your job: it's about showing everyone around you that you care about your work and that you're willing to go above and beyond yourself and others.

Even so, I'm grateful for my family, friends, and colleagues who never stopped believing in me even when I wasn't sure about myself. Accepting this offer is a big step for me, but I know it will be worth it in the end because of all the people who have encouraged me along the way."

“WE NEED OUR SHIPPING PARTNERS MORE THAN BEFORE.”

WE SELECT THE PARTNERS WE TRUST



If you thought the paper industry was going to disappear, think again. Even though the global demand for fine paper has dropped, online shopping drives packaging paper volumes through the roof. We talk with Metsä Group's Vice President Marine Logistics Jyrki Ranki about growth ambitions, innovations driving sustainability and choosing the right logistic partners.

Jyrki Ranki has more than 25 years of experience in the Scandinavian forest industry and logistics. Ranki: *“I started my career in 1993 as working for Metsä Fibre pulp company as a Logistics Manager. My main task was to create and operate a centralised maritime and port logistics solution and organisation for our wood pulp business.”* In 2009 Ranki was appointed as a Vice President of Metsä Fibre Logistics after which he also became responsible for Metsä Group's Scandinavian land transportations and port handling as a head of these operations one year later. After being appointed as Vice President of Metsä Group Maritime logistics in 2015, Ranki can look back on quite some developments within 'his' company.

A CHANGING MARKET

Nowadays customers' consumer behaviour is influenced by environmental factors and a growing demand for forestry products is driven by online shopping. Ranki: *“Over the past years I've seen changes in the demand for different forest industry products. Demand for packaging materials and pulp is growing, while demand for fine paper and newspapers is slightly declining. The change in demand is also partly reflected in the expansion of traditional market areas to basically the whole world. To make this transition we need to evaluate how we operate and deliver products to the market. Fact is that in a global competitive environment, those companies who are able to innovate tend to be the best. The same applies for the logistics companies.”*

Metsä Group is leading the way in advancing the bioeconomy. We invest in growth, bioproduct development and a fossil free future. The raw material for our products is renewable wood from sustainably managed northern forests. We focus on the growth sectors of the forest industry: wood supply and forest services, wood products, pulp, fresh fibre paperboards, as well as tissue and greaseproof papers.

Metsä Group's annual sales amount to approximately EUR 5.5 billion, and we have around 9,200 employees in 30 countries. Our international Group has its roots in the Finnish forests: our parent company is Metsäliitto Cooperative which is owned by 100,000 forest owners. www.metsagroup.com

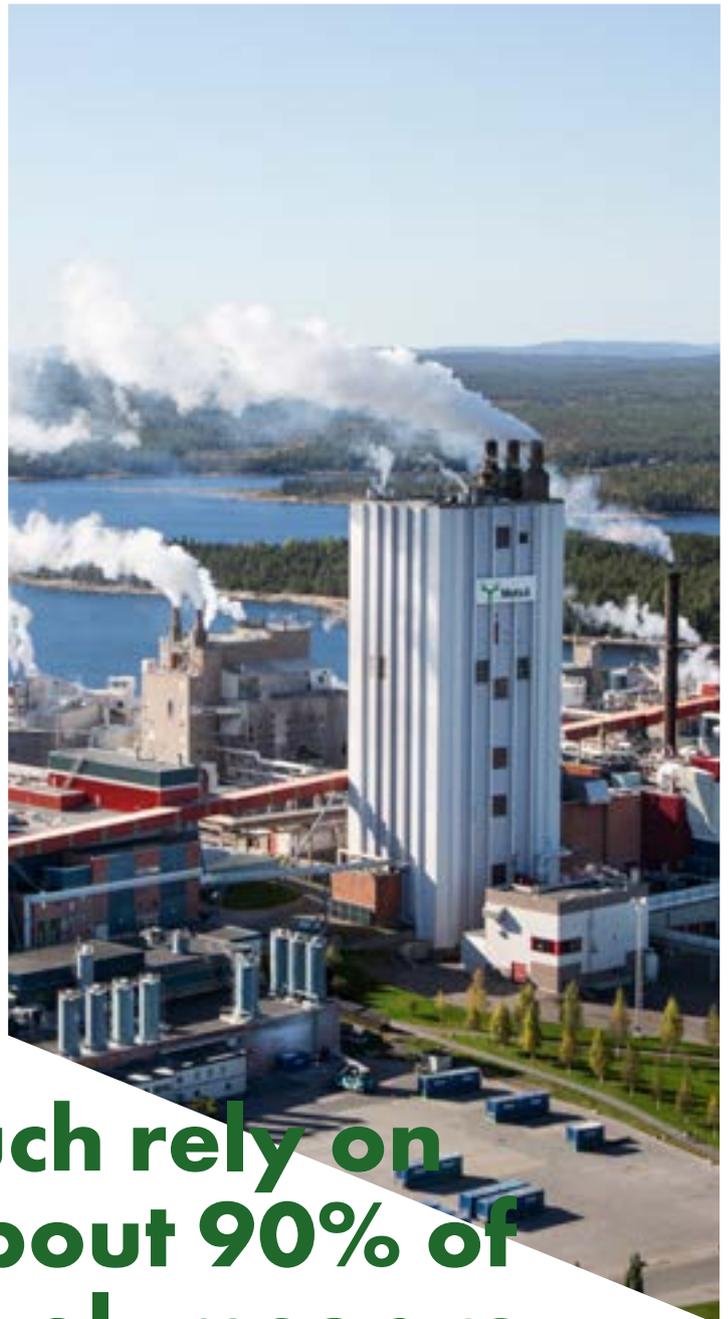
INNOVATION AS A KEY DRIVER FOR GROWTH

Just like in many companies, Metsä has been investing in innovation as a main driver for growth. Ranki: "We have been investing about 4 billion euro's in our plants and facilities. With these investments we work towards 2030 to create an entirely fossil-free production. By that time, our mills will use no fossil fuels at all, and our products will be made entirely out of fossil-free raw materials. In addition the production capacity will be increased. For instance, we invested 260 million euros in our fully automatic saw mill in Rauma, we are increasing our pulp production in Kemi to 1,5 million tonnes per year and in Kaskinen we are investigating the possibility of building a new folding box board factory with a capacity of 800,000 tons per year."

RELY ON SHIPPING

The growing volumes of various forest products need to be transported worldwide. Ranki: "Metsä Group is heavily centralized in Scandinavia. Although we use all kinds of transport modalities, we very much rely on shipping. About 90% of our export volumes are transported by sea to various European, American and Asian destinations."

Over the past decade ship-owners in the multi-purpose shipping market suffered from lower demand. This, led to a significant decline in number of ships. Aging ships disappeared from a growing market and are still hardly replaced by



We very much rely on shipping. About 90% of our export volumes are transported by sea.

In the late 1990s, Metsä Group and Wagenborg started the first shipment of kraftliner board from Kemi to the United States. We started with about 50,000 tons per year, are now doing about 250,000 tons and are growing to 300,000 tons



**We need
our shipping
partners more
than before.**

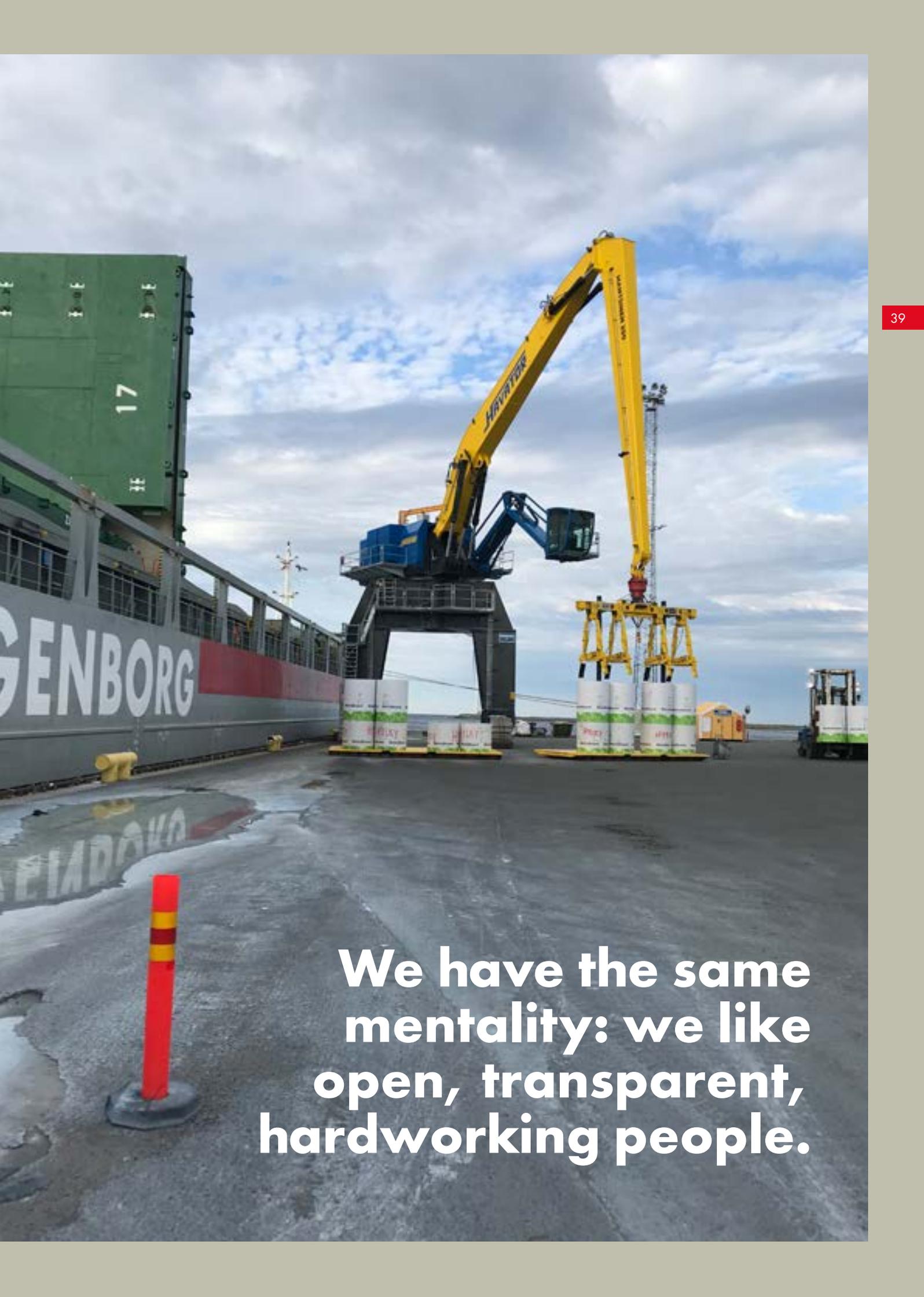
new buildings due to new and upcoming regulations in combination with sustainability demand. Ranki: "It is tough and difficult when we talk about the supply of conventional ships. And new regulations, such as the emission trading system, will make these structural challenges even more complicated. Selecting the right shipping partner is essential for us."

MENTALITY

Metsä Group and Wagenborg are doing business together a long time. "In the late nineties we started our US paper trade with Wagenborg. I think Hans (Kroon, director Wagenborg Shipping North America) is still very proud of the first shipment of kraftliner board from Kemi to the US. We started with about 50.000 tonnes per year, but doing now about 250.000 tonnes and are growing towards 300.000 tonnes: this trade is Hans his baby", Ranki smiles. "Metsä and Wagenborg have always investing a lot in their companies. That is why we were able to grow together. And that works out pretty well, since Finnish people and Dutch people have a similar mentality: we like open, transparent, hardworking people. A promise is a promise, schedules are met and ships and equipment are always in good shape. That is what quality shipping is about for us."

PARTNERSHIP

Nowadays, Metsä Group and Wagenborg are still doing business together. Ranki: "Wagenborg is one of our biggest shipping partners. We have common targets and basically need each other: Wagenborg has always been keen on investing in the right ice-classed tonnage for us and we do have the suitable products for these ships. We would like to continue this great cooperation for many more years and even make it more deeper if possible. We are actively looking for partners to jointly face our challenges and create possibilities for innovations in the future. Now more than ever, a dialogue is needed between supply chain partners to solve the challenging equation of the business continuity, taking into account climatic and environmental facts, constraints, customer needs, and at the same time maintaining operational efficiency and the economic realities of the logistics industry. We need our shipping partners more than before. How we know we bet on the right horse? We simply select the partners we trust."



We have the same mentality: we like open, transparent, hardworking people.



INTERVIEW WITH HARRY DOZE, PARTNER AT MARSTRAT

NORTH NETHERLANDS: THE 'SILICON VALLEY' OF SHIPBUILDING

Someone once characterized the Northern Netherlands as the 'Silicon Valley' of shipbuilding and that is the nail on the head. Was signed: Harry Doze, partner at Marstrat. With the arrival of the Maritime Board Groningen, cooperation in the entire maritime cluster in the northern region has been strongly intensified. A story about pride, creativity, cooperation and innovation.

In 2019, the Maritime Board Groningen was established to maintain and strengthen the maritime sector in the Northern Netherlands. Magic words: sharing knowledge, innovating, connecting and tackling. Doze: *"When I come to Northern yards and I hear people talking, you just feel their pride in their profession; something is being put here! The beauty of the Northern Netherlands is that the entire maritime cluster is physically represented here: from shipyards to shipowners and from suppliers to trainers, insurers, financiers, ports and governments. The establishment of the Maritime Board Groningen was an important step in strengthening cooperation in the sector."*

ECONOMY AND EMPLOYMENT

With a turnover of € 1.3 billion and 4,300 employees at 100 companies, the maritime sector is of great importance to the economy and employment in Groningen. Doze: *"It is necessary to strengthen the sector and to maintain employment. It is good to see that the Province of Groningen is firmly committed to this from a facilitating role, because transport by sea is the most efficient mode of transport in Europe. In addition, 60% of the Dutch shortsea shipowners are located in the North and 90% of this ship production comes from here. There are plenty of opportunities for a strong and innovative shipbuilding sector to put the sector back on the map."*





MICROPANELS

A number of interesting projects have now been initiated. Doze: *"Fifty years after yards in the north of the Netherlands started jointly using computer-controlled steel cutting, there are now great opportunities for the joint production of micropanels in a central robotic 'Shared Facility' for the ship hulls at the individual yards. This seems to provide the best savings with which the shipbuilding sector can further strengthen its competitive position. In this way, the efficient construction of sustainable ships can also be made possible more quickly. In conjunction with a more efficient production chain and the local development of CO₂ reduction technology, a large replacement demand can be foreseen for innovative fossil-free and low-emission ships that can be built in the Northern Netherlands instead of in Asia."*

GREEN MARITIME COALITION

This development fits in perfectly with another recent partnership, the Green Maritime Coalition. This partnership aims to build dozens of emission-free ships in the North before 2030. The Coalition focuses on the development of techniques that significantly reduce or prevent CO₂ emissions from ships. Doze: *"This project can also look forward to a great willingness to cooperate between a large number of parties. And the great thing is, the drive comes from the companies themselves instead of the government or education. Especially now that more than one million euros has been made available as a subsidy from a European fund, we see that everyone in the chain wants to join the Green Maritime Coalition."*

THE ROLE OF THE SHIPPER

The partnerships help the companies in the sector, because they all face the same challenges, opportunities and issues. What are we doing against ageing? How do we ensure that we make ships more sustainable? Also interesting: What opportunities does the North have in making ships more sustainable? How do we deal with new laws and regulations? What can we do to strengthen our competitive position? How does the maritime sector remain interesting for financiers? What can we do to keep the profession attractive to students? And so much more. Doze: *"Every meeting there are issues on the table that we all want to provide an answer to. We commission research, put our heads together and look at possibilities. We discuss which issues are of the utmost importance, the parties involved jump right in. That works. We have to move forward, stay relevant. And how nice would it be if shippers would also get involved in our discussions? The realization that making the entire chain more sustainable starts with the shipper is clearly underway in Norway. Why couldn't we do that here? It is precisely then that subjects can be illuminated from even more angles and we can quickly make progress."*

The realization that making the entire chain more sustainable starts with the shipper is clearly underway in Norway. Why couldn't we do that here?



The beauty of the Northern Netherlands is that the entire maritime cluster is physically represented here: from shipyards to shipowners and from suppliers to trainers, insurers, financiers, ports and governments.

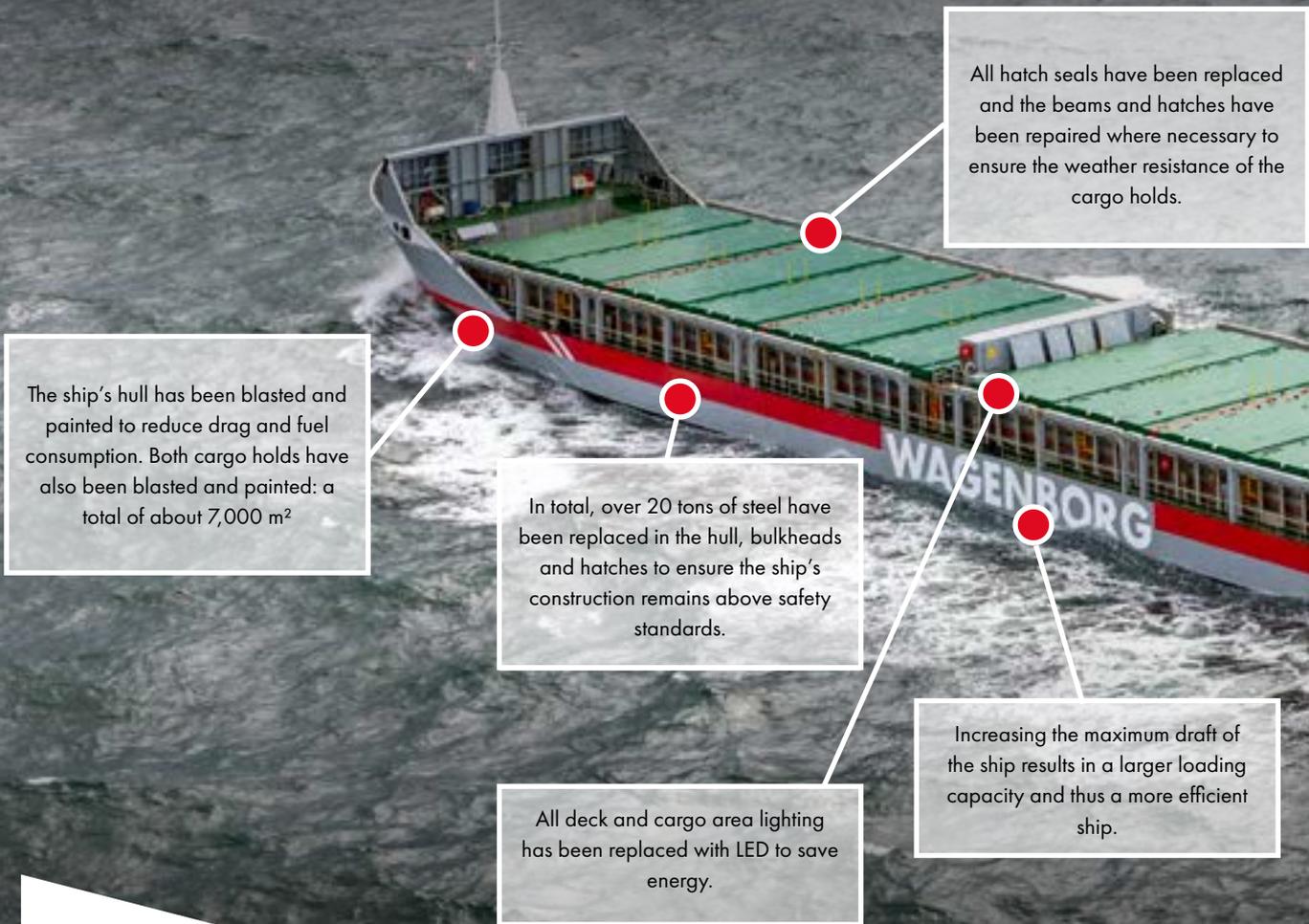
43



The Groningen shipyard Royal Niestern Sander is currently building the third EasyMax for Wagenborg. This multi-purpose vessel with a loading capacity of 14,000 tonnes was ordered in the summer of 2022 and is expected to be commissioned at the end of 2023.

The EasyMax concept was created in 2017 through close collaboration between Wagenborg, Niestern Sander and Conoship. Local subcontractors and suppliers are frequently used during construction. The construction of the EasyMax thus provides employment and is of economic value to the Northern Netherlands maritime sector.

A focus on **LIFE TIME EXTENTION** of the fleet



The ship's hull has been blasted and painted to reduce drag and fuel consumption. Both cargo holds have also been blasted and painted: a total of about 7,000 m²

In total, over 20 tons of steel have been replaced in the hull, bulkheads and hatches to ensure the ship's construction remains above safety standards.

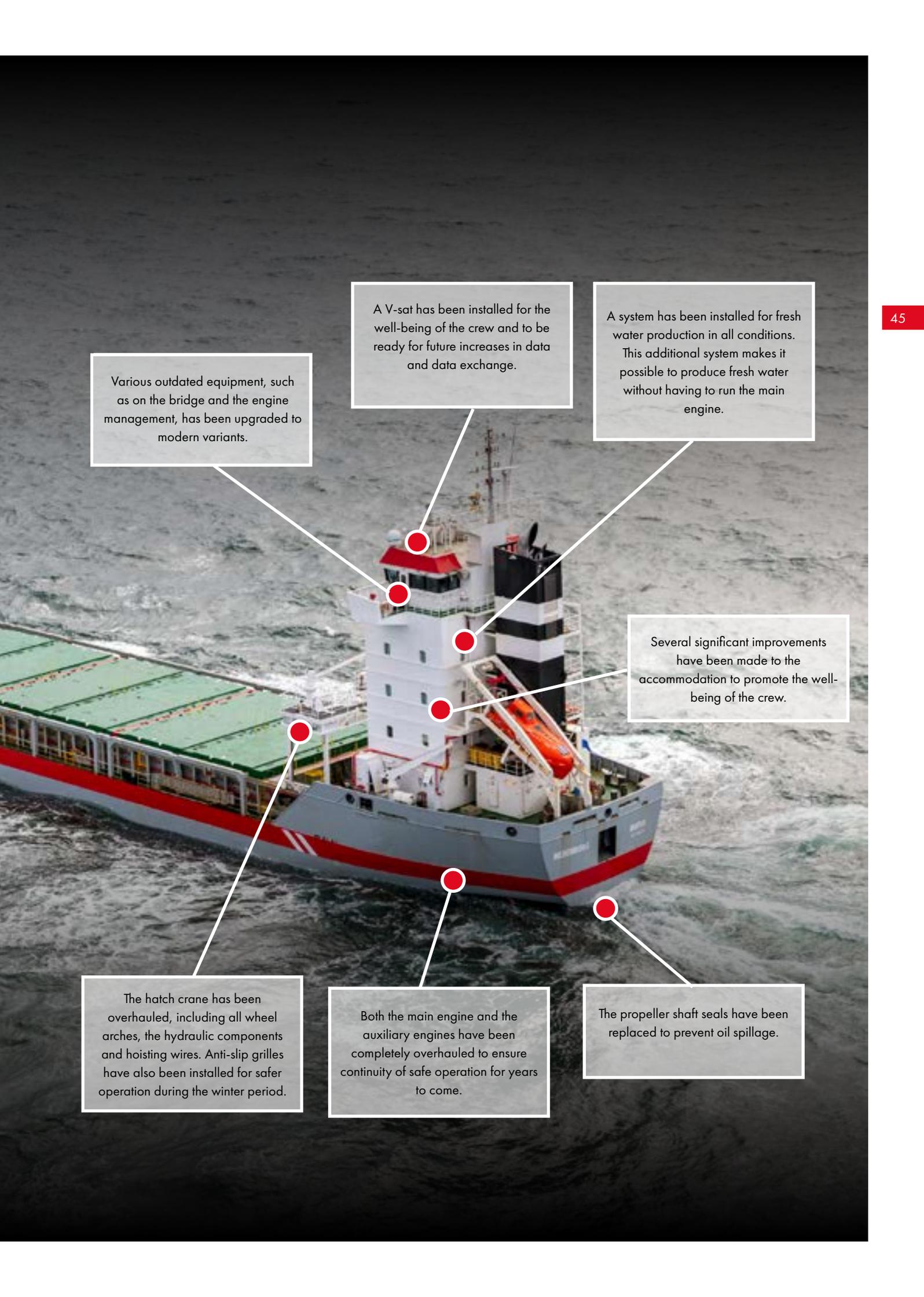
All hatch seals have been replaced and the beams and hatches have been repaired where necessary to ensure the weather resistance of the cargo holds.

Increasing the maximum draft of the ship results in a larger loading capacity and thus a more efficient ship.

All deck and cargo area lighting has been replaced with LED to save energy.

Medemborg ready for another 10 years of service
After several weeks of maintenance, the 25-year-old MV Medemborg has returned to service after her fifth survey. After this refit in Liepaja, the 9,000 dwt M-type vessel is ready for many more years of reliable service.

Wagenborg sets high standards for the quality of its ships. This makes an economic life of 30 years achievable. By applying innovations and adjustments to our existing fleet, this lifespan is extended even further, as is now the case with the Medemborg.



Various outdated equipment, such as on the bridge and the engine management, has been upgraded to modern variants.

A V-sat has been installed for the well-being of the crew and to be ready for future increases in data and data exchange.

A system has been installed for fresh water production in all conditions. This additional system makes it possible to produce fresh water without having to run the main engine.

Several significant improvements have been made to the accommodation to promote the well-being of the crew.

The hatch crane has been overhauled, including all wheel arches, the hydraulic components and hoisting wires. Anti-slip grilles have also been installed for safer operation during the winter period.

Both the main engine and the auxiliary engines have been completely overhauled to ensure continuity of safe operation for years to come.

The propeller shaft seals have been replaced to prevent oil spillage.

René Vogel

Captain Wagenborg Offshore

"A few weeks ago I exchanged the bridge of the walk-to-work vessel Koenigsborg - at least temporarily - for a desk with colleagues from Offshore at the main office in Delfzijl. Until the end of the year I will be working here on revising the manuals. The office colleagues were aware that I might want to make the switch to shore one day and asked if I wanted to take on this project. An interesting challenge, with which I can also help my colleagues on board.

I have mostly sailed for the past 25 years. The interest arose when I sailed on the Wadden Sea as a young boy. At that time I followed a course in electrical engineering, but the sea attracted me and I switched to the Maritime Academy. I have not regretted that for a moment. Sailing gives a lot of freedom and the mentality on board suits me. There is hierarchy, that gives clarity. You discuss matters, the highest in rank makes a decision and that's how you're going to do it.

I started on MV Gaastborg for my apprenticeship. After that I sailed on many different Wagenborg ships, until in 2000 I embarked on the S-series on the ro-ro service between Göteborg and Zeebrugge. There I was promoted to Chief Officer. After eight years it was time for a new challenge and I made the switch to offshore at Vroon, to return to Wagenborg in 2018 as captain on the Kasteelborg. Before I came on board the Kasteelborg, I first supervised the completion of the ship at the shipyard. Later on I also did that for the Keizersborg and Koenigsborg, so a shore job is not entirely new to me.

I still really like sailing: the bond with your colleagues, the Dynamic Positioning, the contact with the customer on board. But sometimes it's time for a new challenge, and who knows, it might be in the office for me. It's something new again, a completely different life. Previously I was away from home for four weeks and then I was really free for four weeks, now I am home every evening with my wife and daughter. It both has its pros and cons. What am I doing around this time next year? We will see."



IN CONVERSATION WITH...

ISABELLE PELCHAT

Superintendent Canadian Coast Guard
Icebreaking Program

HOW TO KEEP THE CANADIAN ARCTIC SAFE



The North Pole has long been locked in ice. But climate change is breaking the Arctic apart, turning a polar landscape into something far more friendly for ships. We talk with superintendent Isabelle Pelchat of the Canadian Coast Guard Icebreaking Program about increasing ship activities in the arctic, safety and the importance of communication.

“Communication on a regular basis is key to ensure the safety of mariners in Canadian waters and protect Canada’s marine environment” states superintendent Isabelle Pelchat van het Canadian Coast Guard Icebreaking Programma.

The Canadian Coast Guard is a special operating agency within Fisheries and Oceans Canada and is divided in several regions. Pelchat: *“I started my career in the Canadian Coast Guard as a 3rd officer on the Lakes, got promoted over time up to a chief officer on an icebreaker, sailed on a marine safety vessel and was a SAR coordinator before moving up as the Icebreaking Superintendent in 2015. With my team we take care of the central region: the Great Lakes, the Saint Lawrence and of course the Arctic region.”*

KEEP WATER SAFE

The Canadian Coast Guard icebreaking program makes sure that marine traffic moves safely through or around ice-covered waters. *“From December to May, icebreakers and hovercrafts operate along Canada’s east coast from Newfoundland to Montréal and in the Great Lakes. From June to November, icebreakers provide services in the Arctic”,* tells Pelchat. *“Our services range from route assistance services, such as freeing vessels, maintaining shipping routes and escorting ships in the main corridors, up to ice routing information and information services. With a fleet of 18 icebreakers and 2 hovercrafts we keep the water safe.”*

Due to global warming an increase of ship activities in the Arctic can be expected. Pelchat: *“This year’s summer has been quite busy again with many vessels up north. We saw a significant increase in the number of cruise ships visiting the Arctic again after the Covid-years. However, the majority of ships have a destination in the arctic to supply the local communities. Only a small number of the ships use the northern waters to make a transit from west to east or vice versa, such as tankers or cargo ships. In fact, as far as I know, Wagenborg’s cargo ships were the only ones to make the transit a number of times this year.”*

THE NEED OF PROPER PLANNING

Making a transit in the Canadian Arctic is not something you do easily. *“Northern Canadian waters are open to all ships. However, there is legislation in force that ensures that not just anyone can sail carelessly in this region. Transport Canada strictly checks ships and crews for rules and requirements from the Polar Code or the Pollution Prevention Act. And of course these rules are there for a reason: sailing in the Arctic can be very challenging and even dangerous for those without proper planning”,* explains Pelchat.

Good preparations do not always guarantee a flawless voyage. The ice situation can always cause unexpected twists. Pelchat: *“In Canada too we see the consequences of climate change. While the arctic is still vast, things change quite quickly around here. Polar ice from the north is breaking apart and starts moving southbound. This results in drifting icebergs or even ice walls in open waters which may blocking paths and prevent ships to pass. This was also the case with one of the Wagenborg transits this year: this vessel planned to sail eastbound through Lancaster Sound from Bellot Strait, but had to turn around and make a new way through Fury & Hecla Strait due to the ice situation.”*

The summer has been quite busy again with many ships in the north.

COMMUNICATION IS KEY

Ships that sail or want to sail in the Arctic are supported where necessary by Isabelle and her team. "We often have regular contact with a ship owner before a ship is in Canadian waters. About a month in advance we already have a pretty good idea of the ice situation and we can give advice for a safe route very well. During the actual transit Coast Guard's Marine Communications Traffic centre in Iqaluit monitors all ship's positions with AIS data, and in addition ships must also report on their current status every four hours. What's clear, is that communication on a regular basis is key to ensure the safety of mariners in Canadian waters and protect Canada's marine environment", Pelchat concludes.

Sailing in the Arctic can be very challenging and even dangerous without proper planning.



The year 2022 was successful for Wagenborg when it comes to northwest passages. With a maiden voyage in June of the year, the season started early. This year a total of eight passages were made. Of these trips, half went west and the other half went east.

The route between Canada and China via the Northwest Passage is considerably shorter and faster than the route via the Panama Canal. Wagenborg's ships reached their destination on average nine days faster this season. In addition, considerably less fuel was needed - the Wagenborg ships in the Arctic all run on gas oil - resulting in a total of over 4,000 tonnes less CO₂ being emitted.

Delicate piling job in Germany

THIS IS HOW YOU REALIZE A DEFLECTION 85 METERS DEEP

Wagenborg Foxdrill has driven three conductors for a client in Riedstadt, Germany. A delicate job, in which the lower part of two of the three pipes had to bend half a degree in the ground. In addition, the three steel pipes had to be driven as deep as possible and exactly parallel to each other.



"The conductors form the basis for exploratory drilling in the area," says Erwin Bruins, Project Leader Wagenborg Foxdrill. "We have driven conductors for this customer before and were of course happy that they asked us again this time. The requested 'deviation' - a small deflection in the bottom tube in the ground - made this job special."

First a short lesson in conductor pile driving for beginners. The conductors are formed by tubes that are - in this case - more than 12 meters long. A special

hammer drives the pipes vertically into the ground. When the pipe is still about 2.5 meters above the ground, the Foxdrill specialists use a special piling trailer to place the next pipe above it and weld the pipes together. Then it's back to the hammer. Depending on the geology of the surface, depths of 30 to 100 meters





The requested 'deviation' made this job special.

The 'deviated shoe' is a piece of tube with a slightly thicker wall thickness. We weld this section to the first conductor at an angle of 0.5 degrees in such a way that it deflects slightly in the ground, in this case at a depth of 85 metres.



can be reached. In this case layers of sand, gravel and clay. Bruins: "We can set the piling hammer with a certain energy level per number of blows. If a pipe has not gone further into the ground after 200 blows per 25 centimeters, that is the signal to stop."

DEFLECTION

So much for the standard. Then how do you create a deflection so deep in the ground? "We do this with the first piece of pipe that goes into the ground, the so-called 'deviated shoe'," explains Bruins. "This is a piece of pipe with a slightly thicker wall thickness. We weld this section to the first conductor at an angle of 0.5 degrees in such a way that it deflects slightly in the ground, in this case at a depth of 85 metres. In this way we ensure that the drilling itself also bends slightly towards the desired location."

In addition, the pipes had to be driven exactly in line next to each other. Bruins: "A drilling rig will soon be built above the conductors to carry out the drilling. Such a tower is not very manoeuvrable. By driving the three pipes exactly parallel to each other, it is much easier for the customer to move the derrick from one conductor to the other."

LESS NOISE AND VIBRATIONS

Measurements were taken during the project to map out the vibrations and noise. "We measured the vibrations at the customer's request in connection with an old water pipe nearby. As expected, the operation didn't cause any problems.

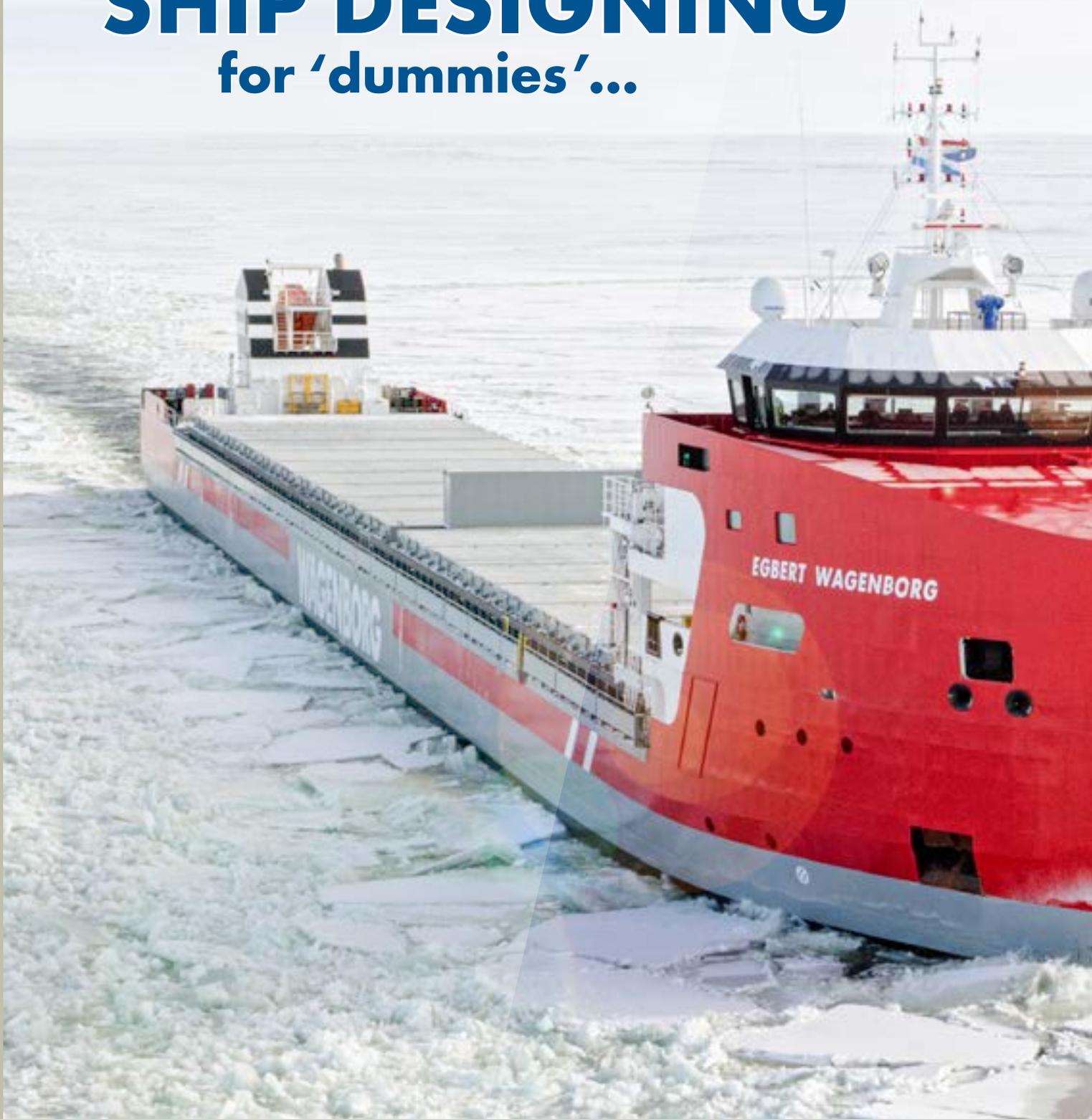
We measured the noise level as a test with the manufacturer of the piling hammer. They have developed a prototype hammer that produces less noise. We tested them here. An interesting development, especially given the increase in geothermal drilling near inhabited areas."



← A special hammer drives the pipes vertically into the ground. When the pipe is still about 2.5 meters above the ground, the Foxdrill specialists use a special piling trailer to place the next pipe above it and weld the pipes together.

The optimal multi-purpose vessel:
SHIP DESIGNING
for 'dummies'...

52





A freighter is a freighter. Right? They all transport products from A to B, sail the same seas, according to the same laws and regulations with comparable systems and techniques on board. Yet one shipping company makes fundamentally different choices in terms of ship design than another shipping company. A palette of choices during the design of such ships means that ships are different in practice. Head of Design & Engineering Jack Kuin of shipyard Niestern Sander explains: this is 'ship designing for dummies'.



1998: MKDV-serie

At the end of the 1990s, Wagenborg was on the eve of an enormous increase in scale. The demand for tonnage to ship dry cargo and containers was high. Wagenborg responded to this by ordering a number of 9,000 tonners from four shipyards in the north of the Netherlands. This resulted in the current K-, M-, V- and D-series vessels, built at Ferus Smit, Bijlsma, Bodewes Volharing and Van Diepen respectively: all true multipurpose vessels with tweendecks, container fittings, large holds and built to cope with relatively to sail at high speeds with large capacities (5,280 kW) and a bulbous bow.

Vxl-serie (2001)

Wagenborg decided to further improve the V-series, resulting in the Vxl-series launched in 2001. Due to a floor, the load capacity of the Vxl series is, for example, greater at 9,300 tonnes than that of the V series. During this optimization process it became apparent that supervising new construction requires a lot of time from the shipping company. The Projects & New Construction department was established with the primary objective of designing, developing and supervising new construction vessels and projects.



When developing a ship concept, the first considerations already start when determining the size of a cargo ship. Kuin: "The design process of a ship often starts with a shipowner's initial request to develop a ship to be able to ship 6,000 tons of steel, for example. But a ship does not always have to ship the same type and quantity of cargo. Completely different return cargoes may be involved that have consequences for the required space in a ship. A heavy load such as steel does not need nearly as large a hold to load 6,000 tons as, for example, 6,000 tons of wood. The choice of cargo package therefore more or less determines the content of the hold." In practice you see that shipowners such as Wagenborg are looking for a kind of best average with which various types of dry cargo can be shipped: the 'multipurpose' ship. During the design process, a number of cargo types are often calculated in order to determine where we find the optimal compromise.

FLEXIBILITY WITH MULTI-PURPOSE VESSELS

In general, a shipping company does not want to pin itself down to one specific cargo. This makes multipurpose vessels a logical choice for shipowners who want to maintain flexibility. A multipurpose vessel is a specific type of seagoing vessel designed to carry different types of

bulk, general cargo and project cargo. Kuin explains: "Wagenborg's old 9,000-tonners are typical multipurpose vessels because they are equipped with container fittings, lashing eyes, tweendecks, grain bulkheads and relatively large holds. In practice, however, not all functionalities were used. That is why, with Wagenborg, we have partly abandoned this philosophy in the development of the newer types of vessels, such as the EasyMax. This ship type is optimized for relatively light and voluminous cargo, because this is where the center of gravity lies within Wagenborg's cargo package. Think of products such as wood, wood pulp, concentrate, grain, fertilizer, paper rolls, but also project cargo."

As soon as more is known about cargo types, volumes and tonnage, other conditions and starting points will be determined. Kuin: "Regulations are an important determining factor when it comes to ship restrictions. For example, the length of a ship determines the number of tugs required in a port, the GT (gross tonnage) prescribes the minimum crew size and the power of a ship is increased if the ship needs to be able to navigate through ice. A shipowner often has certain preferences or even additional wishes or requirements. These often also stem from the intended sailing area. Think of maximum dimensions

From the H to the L-serie (2005-2007)

Shipyards Royal Niestern Sander started working for Wagenborg with a new series of 6,000 tonners: the H-series. With the arrival of these ships in 2005, Wagenborg filled a gap in the market. A few years later, the H-series got a bigger sister, with the ships being lengthened and deepened. The L-series with a load capacity of 7,500 tons saw the light of day in 2007.



in terms of length, width or draft due to specific channels or locks. Take the EasyMax, for example: here we deliberately opted for a maximum draft of 8.60 metres, because this also allows the ship to navigate the Saint Lawrence and the Great Lakes on the other side of the Atlantic."

ENDURANCE AND FUNCTIONALITY

In any case, an Atlantic crossing requires a different approach for a ship than a coaster. Kuin explains: "We are talking about 'endurance': how long should a ship and her crew be able to sail? This principle determines, for example, how much space we have to reserve on board for fuel, drinking water and provisions. But the extra weight that this entails is also an important factor during the design: you cannot transport a load for every extra ton in the design. We also see this dilemma in the choice of

A multipurpose vessel is a specific type of seagoing vessel designed to carry different types of bulk, general cargo and project cargo.

ship functionalities such as ship cranes, tweendecks, grain bulkheads and container fittings. These are all elements that are also largely determined by the type of cargo that has to be shipped: project cargo often requires ship cranes, steel coils often require tweendecks and wheat requires grain bulkheads. All these extra 'features'

bring extra weight; not only of the components themselves, but also of the extra steel that must be added to a ship's construction in order to support or hold it. And in the end, this total weight must also move forward in the water, so that is where we determine a desired speed and the required power and type of propulsion for this."

A-serie (2006)



At the beginning of this century, shipping was a booming business. The transatlantic trade for Wagenborg had started with the 9,000-tonners. An existing MPP ship design with ship's cranes, tweendecks and large square holds caught Wagenborg's attention. In order to continue to grow on the world stage, the shipping company ordered 25 ships of this existing design. The Amstelborg was the first of the A-series to see the light of day in China in 2006.

F-serie (2007)

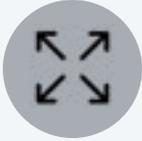
The new construction program was also running at full speed closer to home. Shipyard Ferus Smit started building the F-series; 14,000 tons with only 4,500 kW of power. At that time it was unprecedented to equip such a large ship with minimal power. The nozzle was also introduced on the F-series to give the ship extra thrust in ice and bad weather. In 2009, the Beatrix was the first ship in this series to be christened by Her Majesty the Queen during DelfSail.



CHARACTERISTICS OF WAGENBORG'S MPP FLEET



DWCC
Loading capacity



Intake
Hold volume



Trading area
Global - Europe



Ice class
1A



Holds
Up to 4
box-shaped



Tween decks



Bulk heads

Designing a ship is looking for the optimal compromise based on the main transport flow and type of cargo. I don't think there is a perfect multipurpose vessel, but the EasyMax comes very close

AERODYNAMICS AND FUEL

There is currently a lot of talk in the shipping industry about green ship concepts and alternative fuels. Kuin: "These days, the traditional way of ship design is being turned upside down, because the footprint of a ship is increasingly becoming one of the very first starting points. This is also what cargo owners are increasingly demanding of shipping companies. That is why we now regularly investigate how we can apply dual-fuel systems or what implications the application of new fuels has. Regardless of the type of fuel you choose, you naturally want to use as little fuel as possible, which is why you end up with hydrodynamics. There is also more attention for aerodynamics."

The shape of a ship's hull largely determines how efficiently a ship uses fuel. Kuin explains: "In general you can say that a long, parallel ship with a nice streamlined shape has a lot less resistance in the water than a wide ship with little streamline; we call this block coefficient in shipbuilding."

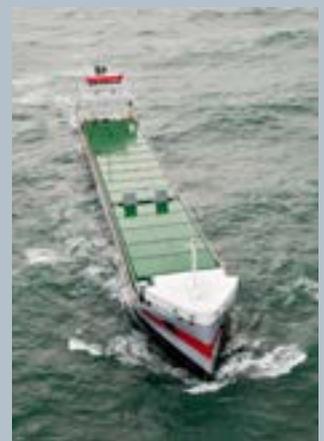
E-serie and Exl-serie (2009-2011)

The H series and L series proved successful in practice. The Projects & New Construction department and the Niestern Sander shipyard therefore set to work on further developing, optimizing and enlarging these ship types. In 2009, the E-series became a fact: more than 10,000 tons of loading capacity without increasing the installed capacity. In 2011, this was even further expanded with the Exl series to a load capacity of 11,000 tons.



Vxxl-serie (2012)

In addition to optimizing existing series, we also worked hard on new hull shapes. The engine power became smaller and smaller in relation to the payload. In addition, the Wagenborg ships sailed less and less fast and with different drafts. The familiar bulb bow was less efficient for this. In 2012, the shipping company therefore introduced the ax bow in the Vxxl series, which makes it easier for ships to glide through the water at relatively low speeds and different drafts.





Dehumidifying systems



Lifting capacity



Container-fittings



Engine power



Fuel type

However, if you want the largest possible square hold, then the ship shape at the front and rear of the ship is quickly compromised.

Look at the EasyMax again: this ship has been designed for the largest possible square well within the maximum ship length of 150 metres. This has resulted in a long narrow ship with a relatively low resistance through the water. The ship has been developed for relatively low speed – Wagenborg attaches no importance to high speeds. As a result, less power is needed to propel the ship and we were able to get by with a small engine. The fuel consumption and CO2 emissions are therefore low per tonne of cargo transported.”

So many options and possibilities: it seems impossible to make the best choice. “The clearer the transport demand and preconditions, the sooner and better a ship concept generally

becomes. In practice, we notice that shipowners nowadays have difficulty with the question of what the new generation of ships should look like. What does the future-proof ship look like in terms of cargo capacity, CO2 footprint, fuel efficiency? In short: how do you arrive at the right choice for possible alternative fuel types in combination with the right ship design. We try to facilitate this by following developments and calculating and budgeting alternatives in order to be able to make the right choices together with our customer. Designing a ship is looking for the optimal compromise based on the main transport flow and type of cargo. I don't think there is a perfect multipurpose vessel, but the EasyMax comes very close”, Kuin concludes with a laugh.

T-serie and R-serie (2013)

In 2008, world trade came to an abrupt halt due to the credit crisis. At that time, Wagenborg had a large order book of about 25 ships. Driven by the economic situation, it was examined how the designs of the ships ordered could be adapted. As a result, for example, the last 4 ships in the Chinese new construction period were launched as T-series, an optimized and extended A-series.

At Ferus Smit, the R-series was created as a result of further development of a series of ordered F-vessels: the load capacity went from 14,000 to 23,000 tonnes, without adjusting the engine power. Moreover, the ax bow was also used here.



EasyMax (2017 - present)

At Niestern Sander, it was examined how a ship could be built within the maximum dimensions of the yard. In 2017, the EasyMax was the result: a 14,000-tonner with only 2,999 kW of power, completely optimized for relatively light and voluminous types of cargo. The ship's equipment was kept as simple as possible, for example container fittings and tweendecks are missing. Furthermore, the ax bow was further developed, the accommodation of the ship was placed in the front, while the engine room remained in the back. This has already created space to make it easier to implement sustainable engine and fuel adjustments in the engine room in the future.

Today, the design focus is still on CO2 reduction: carrying as much cargo as possible with as little power as possible. Digitization and efficient operation throughout the entire chain also contribute to making the Wagenborg fleet more sustainable. The use of alternative fuels will also play an increasingly important role in this.

CONSTRUCTION STARTED EASYMAX

58



Wagenborg Shipping has placed an order with shipyard Royal Niestern Sander for the construction of another 14,000 DWT EasyMax vessel. This fourth ship in the EasyMax series is expected to be delivered in early 2024.

This repeat order fits perfectly into the production process at the yard, as the construction of the third Easymax is currently in full swing. This sister ship of the MV 'Egbert Wagenborg' and MV 'Máxima' is expected to be delivered at the end of 2023.

The EasyMax concept is a multifunctional vessel with a loading capacity of 14,000 tonnes and was jointly developed by Wagenborg and Niestern Sander. Wagenborg received the KVR Maritime Shipping Award in 2018 for this ship design, partly due to its superior fuel consumption. The Egbert Wagenborg and Máxima have proven themselves as sustainable and successful ship types and, together with her future sisters, will continue to contribute to Wagenborg Shipping's position as a leading multipurpose shipping company.

Daniël Waker Superintendent

"We had two ships at home. My grandfather was a captain, my father was a captain. Until I had to go to school when I was 4, we lived on board. It is therefore not surprising that I have wanted to be a captain for as long as I can remember. By the age of 25, I had achieved this goal.

Until 2008 I sailed for Wagenborg. After a trip to another shipping company, I returned in 2017. First as captain, then I became captain-manager. In this capacity, my current colleague Harma van der Gaast came on board. She told about a vacancy for Superintendent in the department. That was the signal for me to apply.

I didn't have to think long about this. At the time, our son was very young. The first period on board after his birth went well, the second time I had the feeling that I was no longer in my place. With a little boy at home and more than 10 years of experience as a captain, the time had come for me to start a new challenge.

I have never regretted my choice for a shore job. I knew the colleagues in the office and the captain owners and ended up in a warm bath. I am now involved in the maintenance of the ships and that is great fun. Every ship is different, every owner has different wishes. That's a nice challenge.

At home, of course, we also had to wait and see how things work out when you are suddenly much more at home, but I can only say that my wife and I like it very much. Our son is now 4 and we have a 1.5-year-old daughter. Those little ones grow so fast. It is nice to be able to witness that."



INTERVIEW WITH ROB WAGENBORG, MEMBER SUPERVISORY BOARD AT ROYAL WAGENBORG

ENTREPRENEURSHIP IS NOTHING MORE THAN: 'YOU HAVE TO SEE IT YOU HAVE TO DARE'

While as a young man he consciously opted for the anonymity of Amsterdam and The Hague, Rob Wagenborg did not have to think for a moment when the need was there within 'his' Wagenborg. The former Wagenborg Executive Board member looks back on the important moments in his life and the choices that brought him there. A story about growing up in a family business and about living up to his mother's motto: "Entrepreneurship is nothing but: 'you have to see it and you have to dare'."

WAS WAGENBORG AN IMPORTANT TOPIC IN YOUR FAMILY WHEN YOU WERE LITTLE?

"No actually not. We did move from Delfzijl to Zwijndrecht when I was 6 because my father started working there as director of the chartering office, but I didn't mind. I was mostly outside. I could skate for hours, tinker with bicycles, play hockey, or hang above ditches to see which animals lived in them. I can honestly say that I look back on my childhood with great pleasure. My father never put pressure on me, although his advice to study Economics did play a major role in my future in retrospect. Who knows how it would have turned out otherwise."

WHY DID YOUR FATHER ADVISE YOU TO STUDY ECONOMICS?

"I was only 16 when I finished high school. I found Biology interesting, but I didn't really know what I wanted. My father then pointed me to Economics,

because I could still do anything with it. In the end I studied Business Economics and Sociological Economics."

AFTER YOUR STUDIES, YOU WENT TO WORK IN AMSTERDAM AND THE HAGUE. WHY THAT CHOICE?

"The anonymity of the west drew; a place where no one knew my last name and where adventure beckoned. A lecturer pointed me to management consultancy firm Boer en Croon. I wrote that I valued interdisciplinary thinking and was hired. I had one weekend to find a place to stay and I succeeded. In an anti-squat building I installed electricity and gas and finished my own room. I liked it there, but my girlfriend from that time wanted to make a long trip. I then realized that if I wanted to, now was the time to do so. Then I quit my job and we traveled through Africa for three months. Meanwhile, I was applying. That is how I ended up at

the Ministry of Transport, Public Works and Water Management, with Neelie Kroes' team. There I learned about team role management and the importance of wanting, feeling, thinking and doing. You need all four to get things moving and rarely find that in one person, so you need a mixed team if you want to achieve something. That knowledge often came in handy later on."

AT THAT TIME, THINGS WERE NOT GOING WELL FOR WAGENBORG.

"No. That was around 1984, the maritime sector was facing a rough period and also Wagenborg suffered considerable losses. As a result, I became more closely involved with the company. Every weekend I talked to my father and my cousin Egbert Vuursteen about the state of affairs. It was important to change course in a short time. While many companies sell in such a situation, we chose to buy

We chose to buy Kramer, a transport company with a lot of cash flow potential, which has enabled us to restore the shipping industry to health.

Kramer, a transport company with a lot of cash flow potential, with which we have been able to restore the shipping industry to health. Not much later, the Ministry of Transport, Public Works and Water Management wanted to privatize passenger services to the islands. We also stepped in and within a year we had three feet on the ground."

YOU YOURSELF TOOK THE HELM AT KRAMER.

"That's right. I started as a director at Kramer, which had just been acquired. I certainly didn't want to be seen as the son of the boss. I arrived in an old car and worked 8 to 8 days. I did feel that I was accepted because of it. Of course it took some getting used to for me. I had always been a consultant and now had to run a company. That's different, but I was very curious and talked to everyone inside and outside the company to get to know Kramer and the industry. That helped me a lot at the time."

WAS IT A DIFFICULT DECISION TO GET INTO A LOSING BUSINESS?

"I fished someone out of the water twice in my life, this was the same: I didn't think about it for a moment. It just had to."

IN 1989 YOU JOINED THE HOLDING BOARD. DID YOU FEEL YOU WERE READY TO LEAD THE COMPANY?

"The company was back on track. That was a good time for my father to say goodbye. Egbert had worked with my father for a few years now and I too had gained the necessary experience inside and outside the company. With the help of then General Director Jan van Nijejenhuis, I dare to say that we were ready to take on the challenge."



↑ On August 30, 1985, Kramer Transport BV in Schoonebeek and Hellum was taken over by Wagenborg, which had an impressive fleet of trucks, tank trailers, gullies, mobile cranes and a heavy transport department.

YOU WEREN'T SITTING STILL AT THAT TIME.

"That's right. Every year we made one or two acquisitions. That was exciting every time. Can you find a solution together and can you offer continuity to employees and customers? I remember the acquisition of Lommerts Transport. We worked 140 hours that week and all employees signed their new contracts during the Eastern Monday of 1992, so that they could return to work on Tuesday."

DURING THAT TIME, WAGENBORG ALSO DEVELOPED ITS FIRST OFFSHORE VESSEL. HOW DID THAT GO?

"In 1997 the opportunity arose to design, build and operate a vessel in the Caspian Sea. A consortium including Shell and NAM wanted to exploit oil and gas there, but it can get very cold there and the ice was a danger to the derrick. A ship had to come to break that ice. I was asked to advise on the type of propulsion and that is how I ended up with Azipods: vacuum drawn stainless steel propellers. I had the tender documents ready when the question arose whether Wagenborg wanted to do this itself. I had a good feeling about it. We had the knowledge in-house and the shipyard in Finland had left a very good impression. In the process I had become convinced that we could do it. The scope of the project included

two icebreakers, three tugs and several special pontoons. The total amount was above 100 million guilders, which was of course not without risk. Then it was a matter of convincing Egbert, the other shareholders and the Supervisory Board. We only did things that we all supported."

HOW DID YOU CONVINC THE OTHERS?

"It was super exciting, everything was new. The country, the tax authorities, the technology. It was important to put the

right people together. We brought in former WPD director Koos Veldman as an expert in sailing in ice and shallow water, Tom van der Molen, as director of the Towage Service, had experience with icebreaking and towing in shallow waters and I had experience in oil and gas. With that nice multidisciplinary mix at the table, we managed to convince the customer that we were the right party to solve their problem. But that helped us too. We could trust each other blindly and managed to limit the risks as much as possible, for example by taking out insurance and placing responsibility for matters with NAM. They wanted to commit us for 4 years: the day rates were geared to that. It was the beginning of a long collaboration. When the NAM saw that we were performing, Shell asked us to build a ship to pump liquid cement, we supplied floating hotels and we are still in business today. This is actually a wonderful example of how we

After the long collaboration with Shell in the Caspian Sea, another long-term collaboration was entered into in 2013 in the form of the construction of the Kroonborg, the world's first walk-to-work ship. From left to right: Egbert Vuursteen and Rob Wagenborg (both then CEO Royal Wagenborg) and Bart van de Leemput (then director of NAM)



We only did things that we all agreed on.

have lived up to my mother's motto: 'Entrepreneurship is nothing but: you have to see it and you have to dare.'

THEN IN 2017 CAME THE REQUEST FROM THE BANKS TO STRENGTHEN THE SUPERVISORY BOARD. WAS IT A DIFFICULT DECISION?

"No, that was actually quickly settled, Egbert and I were out within an hour. Egbert was the right person to stay on board, and for me it was clear: if this is going to help get things moving, then I will. I now look at the company with more distance, and in this way we each try to guide the company through the waves from our own perspective. And that's going really well. Wagenborg is financially on the right track again, we have irons in the fire in several areas, young people are interested in the company, the focus on sustainability in combination with efficiency is taking flight. I am confident about the future of Wagenborg."

HOW DO YOU LIKE NOT BEING SO DIRECTLY INVOLVED WITH THE COMPANY?

"Of course the impact was great, but I have neglected many things over the years and saw plenty of other adventures. As a member of the board you are responsible for so many people. You keep looking back: did I do well. At the same time, my agenda was full of things I still had to do. That all distracted from the now, and that's what life is all about. Since my retirement I have to do much less and I get into that now much more; I can listen to my gut feeling much more. I can only say that it works very well. And at the same time, I'm not done yet. I still have so many plans. I now have a more complete life."

Don't hire people based on what they can already do, but based on their love for the profession.



A young Rob Wagenborg looks after the Scheldeborg in the harbor of Delfzijl. ↑

FINALLY, WOULD YOU ADVISE YOUR CHILDREN TO TAKE CHARGE OF WAGENBORG?

"I leave them completely free to do so, but I would absolutely give them such an experience. It's wonderful what I've been through. But this certainly applies, only if it fits within their talents and ambitions. We sometimes talk about capital destruction in government projects, I think that much more is lost when talent is left unused. Don't hire

people based on what they can already do, but based on their love for the profession. Develop that talent, that makes you unbeatable as an individual, team and company. And whether my children's ambition lies here? Who knows what the future will bring. I also had to distance myself first, to feel the attraction of Wagenborg."

MOMENTS

→

Fourth walk-to-work vessel in service as 'Koenigsborg'

Wagenborg Offshore has launched its fourth walk-to-work vessel (W2W) as Koenigsborg. Koenigsborg is deployed as a standby and support vessel for inspection and maintenance of unmanned platforms in the southern North Sea.

After the positive experiences with the W2W ships Kasteelborg and Keizersborg, Wagenborg has again opted to convert a standard Platform Supply Vessel into this specialist offshore vessel. Formerly named Hermit Viking, the DP2 PX121 vessel was designed and built by Ulstein in Norway. In approximately 6 months shipyard Royal Niestern Sander has converted the Koenigsborg by building a special accommodation module, installing a motion compensated gangway and converting her to SPS-60 class.

With four operational W2W vessels, Wagenborg is one of the market leaders in this offshore walk-to-work niche.





ORG
RESCUE ZONE

KOENIGSBORG



First natural gas flows from Eemshaven through the Dutch network

Gasunie subsidiary EemsEnergyTerminal manages an LNG terminal (liquefied natural gas) in Groningen's Eemshaven. Since September 2022, the first natural gas has been flowing through the national gas network of Gasunie Transport Services. The terminal is supplied via various LNG tankers assisted by Wagenborg tugboats to one of the Floating Regasification Units at the Wagenborg terminal. With the new LNG terminal we are one step closer to the independence of Russian natural gas.





Construction of EasyMax 3 in full swing

In June 2022, the construction of the third EasyMax started at the Royal Niestern Sander shipyard. This new multipurpose vessel is expected to be delivered and put into service at the end of 2023.





MV Arneborg ships timber, wood pulp and paper to the US East Coast

Wagenborg regularly ships various wood products to the American East Coast. In August, for example, wood, cellulose and paper were loaded onto the MV Arneborg in various Scandinavian ports, destined for the American market. The MV Arneborg is one of the crane vessels of 15,750 DWCC vessels in the Wagenborg fleet.

This voyage can be considered as an example for the outstanding performance of the various geared ships on the transatlantic paper trade.





Salt water in your veins?

Working at Wagenborg means working at a dynamic, internationally operating company in a pleasant, open atmosphere. In any field or position: every employee counts!

We provide logistics solutions all over the world.

Do you, like us, think in terms of opportunities and solutions? With us you get plenty of space and support to put your ideas into practice. At Wagenborg, your starting point does not have to be your ending point. Develop, learn, grow and become what you want. Be the architect of your own career.

www.wagenborg.com/career

