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...more space and comfort for passengers

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The highest value



Cover photo: Maciej Bielesz

The rapidly growing wind farm construction sector generates much work for shipyards. Remontowa hosts many ships of various types employed in the offshore wind industry.

We feature the recently accomplished task to bring a newbuilding project of the *Les Alizés* crane vessel to an end, preparing her for constructing a wind farm in the German part of the North Sea. Following the *Orion* Installation Vessel's repair two years ago, this was our second order regarding another vessel of this type in recent years, albeit of a completely different scope.

Leading shipowners engaged in the offshore wind industry use our services. Thanks to such projects, our engineering experience in handling such a fleet becomes even richer and more comprehensive, allowing us to offer this sector a wide range of services.

Among others, geotechnical vessels operate in the Baltic Sea, where Polish-foreign developers will erect wind turbines. These highly specialised vessels require efficient overhaul services to ensure the smooth operation of all systems surveying the seabed in future wind farm construction areas. These vessels also benefit from our vast resources, calling us for repairs, as we report in this Remontowa News.

These and other specialist vessels, such as the M/V Pourquoi Pas?, or the dredgers Charles Darwin and Utrecht, are not the only ones recently here. The ferry Stena Nordica's conversion results are certainly ap-

preciated by passengers, who can now travel in even more comfortable public space, resting in the new superstructure outfitted with care to the tiniest detail.

The chemical tankers recently overhauled here, the regular visitors at Remontowa, can still carry their cargo safely, as can Japanese refrigerated vessels. Renewing ballast tanks or modifying Ballast Water Treatment Systems are just a few jobs we have done on these ships.

In addition, we have retrofitted more vessels with new BWT Systems, which have become our speciality.

Also worth noting are scrubber installations coming back to Remontowa. These are always demanding projects affecting the ship's architecture, including rearrangement or constructing new modules to house the relevant equipment. A short turnaround time for the project completion is often a key factor, which we achieve by prefabricating the components ahead of the system assembly.

Each task we are entrusted with, from dockside repairs and retrofits to complex conversions, brings unique expertise, thus broadening the spectrum of services we provide to shipowners in different market segments. Thanks to their trust, we can better respond to our customers' needs. At Remontowa, we value this as our greatest asset.

Grzegorz Landowski Communications Director REMONTOWA HOLDING 3 *Les Alizés* in full readiness

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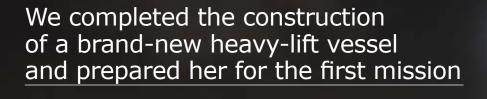
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Remontowa Ship Repair News is a customer magazine of Remontowa Shiprepair Yard, member of Remontowa Holding SA **Publisher:** PORTALMORSKI.PL Ltd., Na Ostrowiu 1, 80-958 Gdańsk, Poland.

email: g.landowski@remontowaholding.pl

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Les Alizés in full readiness

In June 2023, Remontowa Shiprepair Yard finalised the project to complete the newly built Crane Vessel while adapting her for the first offshore wind assignment.

Les Alizés, built at a Chinese shipyard, was handed over to Jan de Nul in January 2023. The Belgian shipowner entrusted then Remontowa with executing the final phase of the vessel's construction and fitting her for the first contract, which is the transportation and installation of 107 monopile foundations and one power substation at the Gode Wind 3 and Borkum Riffgrund 3 offshore wind farms in the North Sea.

Les Alizés by night. With its huge deck crane boom raised and illuminated, she was visible from Gdansk's districts more than 10 kilometres away from Remontowa. Photo: Maciej Bielesz

The large scope of work and the short time for project execution was quite a challenge. Our specialists installed more than 300 tonnes of new steel structures onboard, of which three platforms, weighing almost 100 tonnes, had been prefabricated in Remontowa.

We have reinforced the ship's structure below deck and installed over a dozen winches foundations previously fabricated at our yard. We also installed two auxiliary cranes with a lifting capacity of 45 tonnes and much other equipment the shipowner provided.

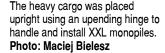
Many tasks were done by our pipe fitters, who raised the cleanliness of the vessel's hydraulic installations. A job of great scope was flushing hydraulic pipes with diameters as large as 220 mm and a total length of around 2.5 kilometres and etching all pipes made of black steel. They also connected the hydraulic pipeline sys-

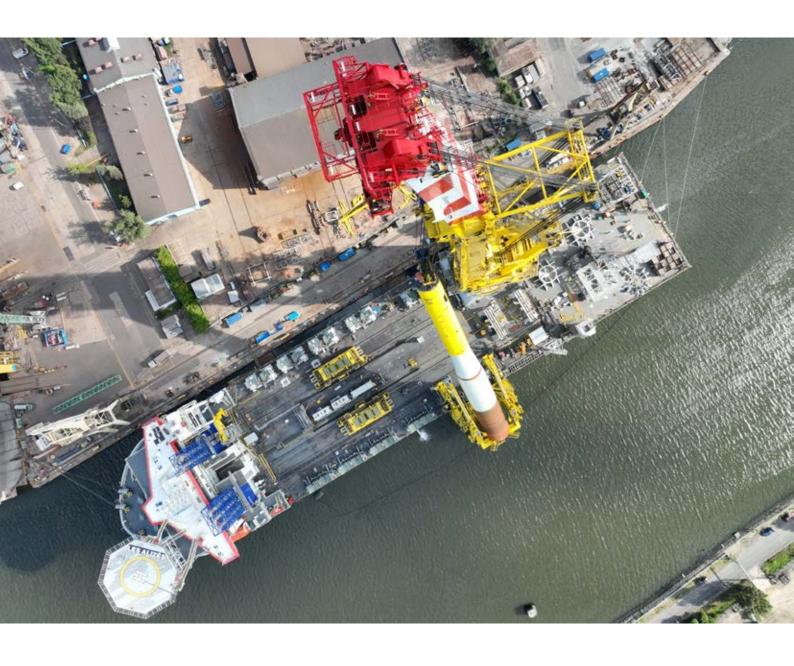
tem by the so-called interfaces to ensure a smooth power supply to the equipment that operates the monopiles.

The fuel system has also been modified by increasing the diameter of some pipelines, etching the fuel pipes leading to the main engines, and fixing some GRE tubes.

Our electricians mounted large switchboards. They also laid almost 11 kilometres of cables routing them in trays and special damage-resistant covers (defenders) on board. They also replaced 38 large electric motors in the main crane engine room.

Les Alizés is specifically designed for lifting, loading, transporting, and installing the heaviest offshore wind turbine foundations and components in a floating mode and with ultra-low emissions. She features a main crane of 5,000 tonnes, a deck loading capacity of 61,000 tonnes,







The crane's operation was tested using a monopile weighing 1,420 tonnes, manufactured for the Borkum Riffgrund 3 farm.

Photo: Maciej Bielesz

and a deck space of 9,300 square metres to transport several heavier future foundations in one trip.

During the project execution at Remontowa, the vessel underwent tests of specialised equipment. These include Universal Quick Connector (UQC), an innovative motion-compensated, electrical pile gripper integrated with a guidance and survey system and a fully automated monopile handling system, which consists of a set of cradles, a skidding system, and an upending hinge to handle and install XXL monopiles.

Remontowa assisted the shipowner and manufacturer with commissioning and testing the new Huisman crane with a lift-

ing capacity of 5,000 tonnes. The crane's operation was examined using a monopile manufactured for the Borkum Riffgrund 3 farm, weighing 1,420 tonnes and measuring around 87 metres in length, which was not the largest piece *Les Alizés* could install.

That oversized cargo arrived in Remontowa on a barge. Once moored to the side of *Les Alizés*, it was transferred from there by the ship's main crane onto the deck. The tests consisted of lifting the monopile, moving it horizontally and placing it upright - just like during a wind farm installation, where the monopile is hammered into the seabed. The crane tests lasted nine days.

Once the job was completed, all the shipyard's prefabricated structures, communication paths on deck and other work areas were preserved and painted. The large shipowner logo on the main crane column was also renewed. Divers inspected the azimuth thrusters and replaced the sensor covers.

The project to execute the final stage of the *Les Alizés* newbuild completion was carried out by Remontowa on time and to the highest quality and safety standards applicable to the offshore wind sector.

It was a highly complex job, requiring excellent workforce organisation and coordination of many shipyard professions, optimal use of infrastructure (at peak times, over a dozen wheeled cranes, with lifting capacities of 100 tonnes, were operating non-stop), and meticulous logistics. The shipowner also highly appreciated Remontowa's flexible approach at various project stages.

In June 2023, the *Les Alizés*, once completed and fitted with new equipment, left Gdansk on 9 June and arrived in the port of Eemshaven in the Netherlands after a 13-day journey, ready to run the business.

In August, Jan De Nul announced that Les Alizés kicked off her maiden assignment by installing the first monopile foundation to construct Ørsted's Gode Wind 3 and Borkum Riffgrund 3 wind farms in Germany. At the end of June, the first monopiles were loaded onto the vessel before departing to the installation location in the German North Sea.

Les Alizés will transport and install 106 wind turbine monopile foundations and one offshore substation foundation, including the associated topside.

Les Alizés, once its construction was completed and the systems' smooth operation checked, left Remontowa heading for Eemshaven in the Netherlands.

Photo: Maciej Bielesz





The converted and illuminated *Stena Nordica* sailed out of Remontowa at night. **Photo: Maciei Bielesz**

The *Stena Nordica* ferry gets a new superstructure

More space and comfort for passengers

In April 2023, Remontowa Shiprepair Yard completed the conversion of the *Stena Nordica* ferry, expanding public space and comfort for passengers travelling on the Fishguard - Rosslare route.

The Stena Line ferry arrived at Remontowa on the first of January, 2023, but intensive logistical, design and production preparations for the project began many months earlier.

The most important aim of the conversion was to enlarge the existing space of the ferry, where passengers can spend their time comfortably enjoying the many amenities. To this end, Remontowa fitted

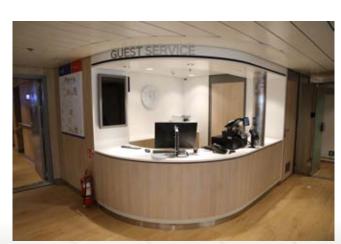


conversions



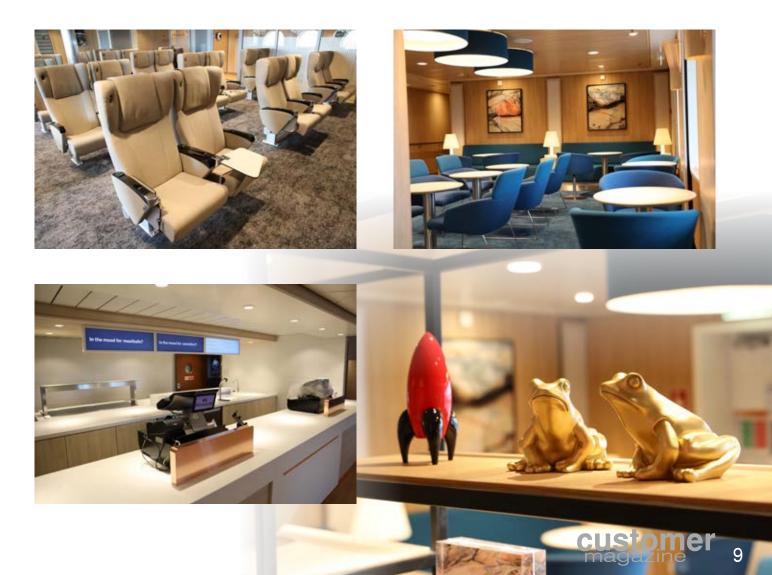












the ship with an additional superstructure, previously fabricated at the shipyard and installed above deck five.

Among other things, the new space includes a restaurant, an open bar and an additional lounge with airline seats and tables, where travellers can watch TV and use personal electronic devices. New furniture and many furnishings have been installed there.

- We are delighted to have secured the *Stena Nordica* ferry, which is currently being refitted, for the Fishguard - Rosslare route. This is to increase passenger space and add several new features to increase comfort and provide a better travel experience for passengers – Stena Line reported on its website while the project was still underway.

The structural alterations to the ferry associated with adding the new superstructure weighing almost 100 tonnes required sufficient stabilisation. Remontowa de-

signed and installed a special steel structure on the stern, the so-called beaver tail, weighing nearly 60 tonnes to improve navigational safety and comfort.

As part of the refurbishment, the passenger lifts at the bow and stern were replaced, with one serving decks 3 to 5 and the other serving decks 3 to 6. The existing passenger spaces on decks 4 and 5 were also renewed.

The execution of the works mentioned above involved the modification of numerous ferry systems. Inspection and overhaul were also carried out in the stern ramp area, as well as maintenance and painting.

It is worth recalling that this was not the first visit to Remontowa by *Stena Nordica*, which underwent her class renewal more than two years ago.

Remontowa installed a new superstructure and a so-called "beaver tail" on the stern to stabilise the ferry.

Photo: Sławomir Lewandowski





On the Sten Nordic, we replaced approximately 13 tonnes of steel.

Photo: Sławomir Lewandowski

The diverse scope of work on chemical tankers

Renewed ballast tanks

During Q2, Remontowa Shiprepair Yard hosted several chemical tankers. Among them were vessels from Norwegian owners and those managed by a company in Singapore.

We performed major steel replacements on two vessels, and one arrived for her first special survey.

On the *Sten Nordic*, owned and managed by Stenersen AS, we replaced approximately 13 tonnes of steel in the ballast tanks. Then,

the ship underwent maintenance and painting of the renewed surface according to the ballast tank coating specification. In addition, the starboard and port side ballast tanks were cleaned under very high pressure and received a new paint system.



The overhaul's scope also featured replacing radars and the Voyage Data Recorder system. Standard work, commissioned by a classification society, included davit load tests and overboard valve inspections.

We inspected two mooring winches and boilers. The shipowner also commissioned a modification to the thruster. We replaced the seals and adapted that propulsion component to run on biodegradable oil.

It's worth recalling that we fitted the Sten Nordic with a BWT System three years ago, installed in a compartment previously adapted from the Nitrogen Room at Remontowa. The shipowner informed us that the system worked flawlessly. However, during the vessel's recent stay at Remontowa, we modified the BWTS room's heating system, installing different types of heaters to ensure adequate thermal conditions when the *Sten Nordic* navigates through cold regions.

Another Norwegian chemical tanker, *Key North*, was last hosted at Remontowa in 2020. That project was dominated by, among other things, steel replacements in various areas of the ship and overhauls of the main engine and three auxiliary ones.

The Key North chemical tanker moored at Remontowa's quay in 2023.







Nordic Ace called at Remontowa for the first special survey.

Photo: Sławomir Lewandowski

The largest scope of work during this year's drydocking of the vessel, technically managed by Fjord Shipping AS, was a full overhaul of the main engine and replacing more than 10 tonnes of steel in all ballast tanks, mostly in the underwater part of the hull.

In addition, the work on the ship's propulsion is worth mentioning, which included, among other things, pulling out the shaft line, a complete overhaul and machining of this component, including the seal replacement. The anchor winch underwent an overhaul, including shaft machining. We also performed a large amount of maintenance and painting work.

In Q2, we refurbished the chemical tanker *Nordic Ace*, too. Bernhard Schulte Singapore technically manages the vessel.

She entered Remontowa for the first special survey. The drydocked *Nordic Ace* underwent a standard bottom inspection, hull maintenance, overboard valve inspections, boiler cleaning and a modification to the BWT System, including mounting additional salinity sensors and a bypass valve. In addition, our Client commissioned the modification of the heating coils in two fuel tanks. The vessel's superstructure was also renewed. Our teams overhauled and modified the thruster, replacing the sealing and adapting it to run on biodegradable oil.

customer

Chemical tankers entrusted to us by Sea Tank Chartering

Regular maintenance

In previous years, most Sea Tank Chartering vessels underwent scheduled repairs at Remontowa Shiprepair Yard. The same applies this year.

Key South was the first vessel of Sea Tank Chartering serviced at Remontowa in Q2 of 2023. Photo: Sławomir Lewandowski Former visitors to our shipyard included *Key Bora, Key Breeze* and *Key Bay*. In 2023, the chemical tankers *Key South* and *Key East* were the first to call here.

Both vessels underwent a similar range of repair projects.

Overhauling the main engine, generators, and boilers is worth mentioning on *Key South*. A large scope of work was dedicated to enhancing the operation of the anchor windlass and the steering gear actuators. When the ship was dry-





The Key East underwent a comprehensive overhaul at Remontowa.

Photo: Sławomir Lewandowski

docked, we sealed the shaft. In addition, the underwater part of the hull was then grit-blasted and painted.

On the second chemical tanker, Key East, we paid much attention to pipelines. We renewed all sanitary water pipes, from steel to those made of plastic. That work covered many rooms, including the galley, toilets and crew quarters. We performed this task in several successive stages to enable the crew to function normally on the ship.

An important item on the schedule was a comprehensive overhaul of the main en-

gine and all generators. The cargo tanks underwent extensive maintenance. Our job on the deck included overhauling the anchor windlass and mooring winch and the chemical tanker's steam system.

Once the vessel was docked, its hull underwent maintenance. In addition, we performed shaft sealing and steel renewal.



The TSHD Charles Darwin left Remontowa with the bottom door seal system replaced.

Photo: Sławomir Lewandowski

The dredgers *Charles Darwin* and *Utrecht* have been enriched with new systems and equipment

Specific job

Dredgers from leading European shipowners specialising in marine engineering projects have been constant visitors to Remontowa Shiprepair Yard for years. In 2023, the first vessels of this type were *Charles Darwin* and *Utrecht*. The latter has arrived here thrice in the past two years!

The Trailing Suction Hopper Dredger (TSHD) *Charles Darwin*, owned by Jan De Nul, called at our shipyard to replace the bottom door seal system, which was the major task of this project. This specific job involved replacing the existing system with a new one, a proprietary solution de-

veloped by the shipowner. We carried out the disassembly and reassembly of the bottom door, followed by testing the new system.

In addition, we did a significant portion of work on pipelines, electrical equipment and insulation in the engine room. The



hull underwent a large scope of maintenance. In addition, there were also many steel replacements and outfitting work in the hopper, bottom door area and overflow pipe. On deck, we refurbished the mooring winches and windlasses.

Charles Darwin features 30.500 cubic metres of hopper capacity. With a limited draught of only 12 metres and an overall length of 183.3 m, combined with three thrusters of 1,350 kW each, the vessel can operate in shallow or confined waters. With a relatively low propulsion power of 2 x 10.800 kW, she can reach as much as 16 knots of speed in the open sea. This is due to an optimised hull design and specially designed propeller nozzles, which translate into low fuel consumption.

Our teams replaced the seals on the bow thrusters' shafts and dismantled and reassembled one rudder blade to renew the seals.

Once *Charles Darwin's* repair project had been completed, she was followed by another TSHD - *Utrecht*, owned by Van Oord, which we prepared at Remontowa for a new assignment.

This was the third visit to our shipyard in the past three years. In 2022, we fitted this

vessel with a so-called "bow coupling," a component used to release dredged spoil ashore. Two years ago, *Utrecht* underwent a class renewal with us, extended by a Ballast Water Treatment System installation, among other things.

The most important task of this year's overhaul was mounting a special sieve structure above the hopper. The sieve, supplied in parts by the shipowner, is expected to separate gravel of the relevant size to protect marine wildlife during the UK project.

The installation of the sieve structure required piping modifications. We removed one of the overflows and inserted a new pipe that will discharge the dredged material - water and sediment - off the ship, including the previously mentioned gravel of a different size.

In addition, pipelines on various dredge systems underwent repairs. Also worth mentioning are the replacements of: the electric motor of the draghead winch, the flanges of the underwater dredge pump cone structure, and the renewal of insulation on the exhaust pipes.

We prepared the dredger Utrecht for a new assignment. Photo: Sławomir Lewandowski



Ocean Observer, Horizon Geobay and Dina Polaris survey the seabed for wind farms in the Baltic Sea

Geotechnical vessels

In between assignments in the Polish Baltic Sea economic zone, the Gardline and Myklebusthaug Group operated special vessels called at Remontowa Shiprepair Yard for repairs.

In Q2 of this year, two vessels belonging to Gardline Marine Sciences, among others, benefited from our shipyard's services.

This renowned shipowner, part of Royal Boskalis Westminster N.V. since 2017, has been active in the marine industry for 50 years. Starting in the 1980s, for three decades, the company was the main hydrographic contractor for the UK government, ensuring the safety of navigation in British territorial waters.

In 2002, Gardline expanded its activities to include geotechnical services and environmental research, which it now con-

ducts in the Baltic Sea Polish economic zone. Poland's first wind farm is localised in this area to be built near Ustka. For this reason, the activity of this shipowner's vessels can be seen along the Polish coast and in the Port of Gdansk.

The *Ocean Observer* called at Remontowa between offshore assignments to undergo repairs and be prepared for the next job.

Among other things, we replaced hydraulic hoses, which are plentiful on board due to the nature of this ship. Other tasks included the repair of sewage plugs, as well

The Ocean Observer, after repairs, moored at the quay of Remontowa. Photo: Sławomir Lewandowski





The *Horizon Geobay* and *Dina Polaris* (in the background) were docked side by side at Remontowa. **Photo: Sławomir Lewandowski**

as the pressure testing of dozens of CO2 cylinders. Our specialists also repaired the steel louvres and doors; the latter, once dismantled, were transported to the hall and underwent a comprehensive overhaul.

The electricians made cable routes for the radar equipment and repaired the alarm system in the steering gear. Our outfitters performed repair work in the ship's accommodation area and surveyed the fast rescue boat davit.

When the *Ocean Observer* bounced off the Remontowa quay, the *Horizon Geodiscovery* and *Ocean Vantage* were also standing at the quay of the Port of Gdansk.

Another Gardline-operated vessel at Remontowa was *Horizon Geobay*, which also conducts geotechnical surveys in the Polish part of the Baltic Sea, inspecting the ground for a future wind farm.

She is a DP2 Multipurpose Site Investigation Vessel featuring a heave compensated geotechnical drill rig with downhole sampling and CPT (Cone Penetration Testing) system mounted over a central moonpool and a seabed CPT system allowing her to drill boreholes and perform deep push seabed CPTs for foundation design and site characterisation.

The vessel features a fully equipped offshore soil testing laboratory, allowing fast turnaround of critical tests. She can also be mobilised with shallow sampling geotechnical equipment.

The *Horizon Geobay* arrived for an emergency repair, during which we replaced the seal on one of the main propulsion thrusters.

Those two were followed at Remontowa by the *Dina Polaris*, another geotechnical vessel surveying the Baltic Sea bottom. However, that ship wasn't here for the first time. Last summer, she underwent mobilisation at the quay of Remontowa due to another assignment. We installed new steel structures on the ship's drilling tower and deck.

During this year's overhaul, *Dina Polaris* was drydocked. We enhanced the propulsion system's operation by overhauling the two thrusters, of which one was removed and replaced with a new thruster supplied by the shipowner. Also in scope was overhauling the azimuth thruster and two podded propulsors, which were dismantled for that purpose.

We also modified the ROV compartment switchboard and connected new power

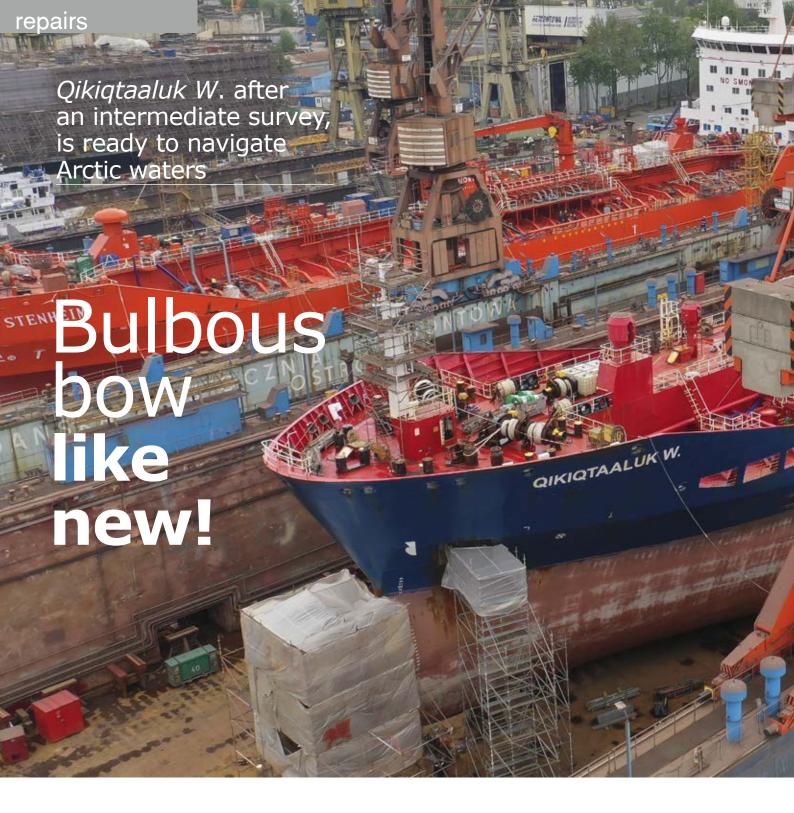
supply wires that we had routed from the machinery control room. The vessel also underwent maintenance.

The *Dina Polaris*, managed by Mykle-busthaug Management AS, is a DP2 and Clean Design certified integrated geotechnical survey vessel (IGSV) destined for research in harsh weather conditions. As an ice class A1 vessel constructed according to Baltic rules, she can operate in cold climate environments with ice thickness up to 0.8m.

She can handle 2500 m of drill string. Ram hoist system with twin wire suspension gives safe, efficient and compensated handling of the drill string and all in-hole tooling.

The *Dina Polaris* is fitted with a soil laboratory, enabling geotechnical engineers to immediately classify soil and determine strength parameters for real-time design, analysis and assessments whilst offshore. The laboratory is equipped with both - the necessary tools to conduct standard soil tests and, optionally - a special seabed unit deployed through the vessel's moonpool to rapidly conduct an array of in situ tests in shallow and deep water.

customemagazine



This was the Canadian tanker's second visit to Remontowa Shiprepair Yard after a year away.

Qikiqtaaluk W. first entered our shipyard in May 2022. Then we fitted the vessel with an anchor foundation on the stern and a windlass mounted on the main deck. The steel foundation, weighing 8 tonnes, was prefabricated in our shipyard. We also modified the transom at that time.

Installing an anchor at the stern is required for any vessel entering ports located on the Great Lakes of North America, where, among others, *Qikiqtaaluk W.* operates.

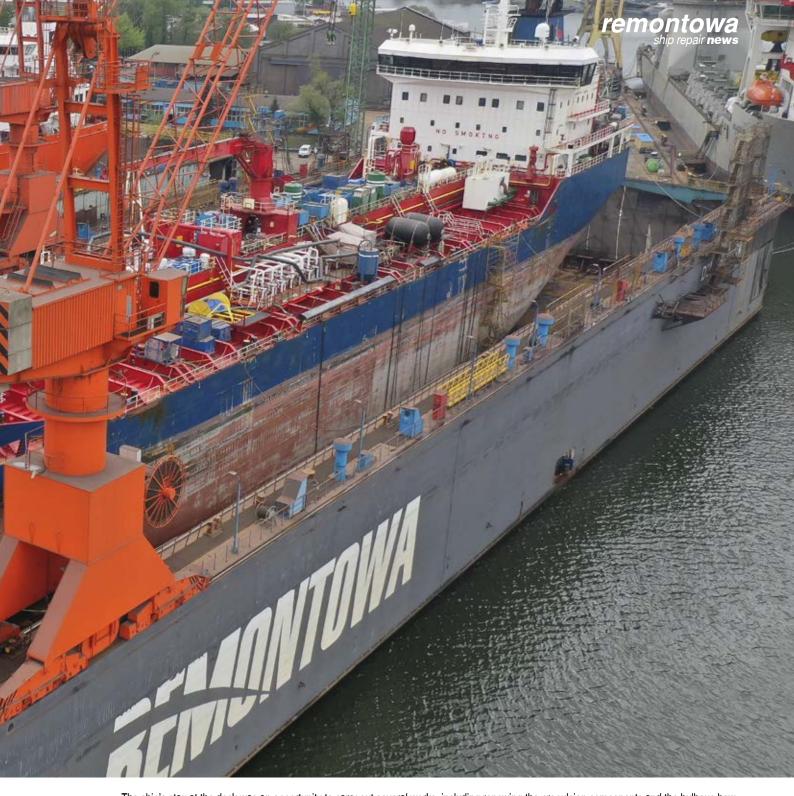
This year, the ship called at Remontowa for an intermediate survey. Another reason for the visit was a repair to the bulbous bow.

Once the ship was drydocked and the damage level assessed, it was decided to replace approximately 20 square metres of plating on this component. In addition, we replaced three affected frames inside the hull structure.

While the ship was in the dock, we replaced two echo sounders. The propeller

blades were dismantled and machined. We replaced the seals - under the propeller blades and on the propeller shaft at the bow and stern.

Performance improvements to the propulsion system included work on the main engine, including an overhaul of the exhaust valves and the steering gear. We inspected the pumps, including the cargo ones from the cargo tanks, which underwent maintenance and the HT pumps



The ship's stay at the dock was an opportunity to carry out several works, including renewing the propulsion components and the bulbous bow.

Photo: Sławomir Lewandowski

on three generators. We conducted insulation condition surveys on three alternators and the main engine shaft generator.

Our pipefitters handled various systems, including seawater pipes in the engine room. They also replaced the bunkering pipes and the ones of the tanks' washing system. Electricians inspected the motors - the fire pump and those powering the bow anchor windlasses.

The deck cranes needed our attention the provision one at the stern and the rescue boat davit. On the former, we installed a new boom. We replaced the wire ropes and inspected the sheaves on the second, located amidships. We also checked all the hydraulics, repaired the fault and restored the davit to full operation.

Another interesting task was installing an on-deck, hydraulically driven floating oil barrier laying drum. The previous one - manually operated - had been damaged in a storm. In addition, the vessel also received a spare drum at Remontowa, both designed by the naval architects of our Remontowa Marine Design in-house engineering company.

The refit project also involved work on deck and in the cargo tanks to enhance crew safety and comfort. We replaced railings and handholds, modified the pilot ladders and did some outfitting jobs in the superstructure. The latter consisted of replacing carpets in the staircase and control room, replacing tiles in the galley and washbasins in the toilets and cabins, and refurbishing the ceilings.

custome magazine



The Baltic Spirit refrigerated vessel underwent a special survey.

Photo: Sławomir Lewandowski

We develop fruitful cooperation with Nissen Kaiun CO.LTD.

Japanese reefers

Remontowa hosted the *Star Leader* and *Baltic Spirit* from the fleet of over 100 vessels owned by the Japanese Client that have used our services for years.

We have previously refurbished many of these ships. In 2019 and 2020, Star Spirit, Star Stratos, Star Trust and Star Best left Remontowa, fitted with Ballast Water Treatment Systems, among other things. Last year, Star Courage, Star Endeavour I (departed under the new name of CS En-

deavour), CS Best, and CS Service entered our docks. The Baltic Spirit and Star Leader joined in 2023.

The project's main scope on the *Baltic Spirit* regarded the reefer's class renewal. Additional work included replacing the steel in the ballast tanks, relocating the



anchor chain stoppers, and installing and modifying the communication platforms on the main deck. We also renewed pipes from the seawater system.

The ship's stay at the dock facilitated overhauling the overboard valves, renewing the hull and performing work on the shaft line. We have also brought back full corrosion protection of the hull by renewing the zinc anodes. In addition, we conducted standard inspections and tests of gangways, boat davits and deck cranes.

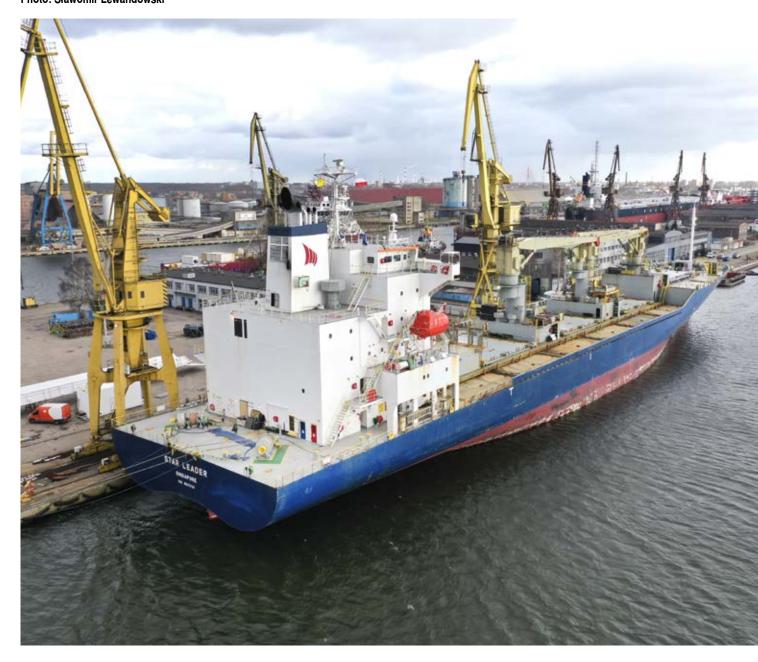
The Star Leader was another refrigerated vessel owned by Nissen Kaiun CO. ser-

viced at Remontowa this year. The main, although not only job, was modifying the existing Ballast Water Treatment System, entailing much work on pipelines and electrical equipment.

We installed more than 152 boxes for D-Rings, previously prefabricated at Remontowa, in the ship's cargo holds.

We renewed the steel on the bow plating and mounted new bulwark brackets. Much work was also done on the crane and the hold coamings.

The main job done on the *Star Leader* was modifying the existing Ballast Water Treatment System. **Photo: Sławomir Lewandowski**



Another visit by the M/V Pourquoi Pas? research vessel

Overhauled equipment is ready to go

This specialist French vessel made its second call at Remontowa eight years after her last visit.

The *Pourquoi Pas?* can conduct hydrographic (deep or coastal waters), geo-scientific, physical, chemical and biological oceanographic missions and deploy the institute's scientific equipment. The ship is co-financed by IFREMER (the French Research Institute for Exploitation of the Sea) and the French Navy.

It is worth recalling that for the first time, the *Pourquoi Pas?* entered Remontowa in 2015 and underwent a second special survey of extended scope. This year's repair project also covered many topics.

MV Pourquoi Pas? underwent a large amount of work in the dock. Remontowa

The refurbished Pourquoi Pas? after repairs at the shipyard's quay.

refurbished cabins in the social area, focusing on bathroom showers repairs, and performed treatment of hull and superstructure; including the bridge wings. In addition, two tanks underwent maintenance - the heeling tank and the afterpeak.

Much outfitting was done to adapt the ship's facilities to accommodate specialised equipment. The traction winches underwent overhauls with bearing replacement, among other things. The telescopic beam's cylinder was restored to full efficiency at the stern.

In the engine room, two generating sets and alternators were overhauled. In addi-

tion to the traditional work, an overhaul of specialised equipment (such as sounders and seismic sensors) was carried out, hidden in a special gondola attached to the ship's bottom.

Pourquoi Pas? was also refreshed on the sides. The new logo has replaced the previous image of a dolphin, and the name IFREMER appearing on the ship has been replaced by FLOTTE OCÉANOGRAPHIQUE FRANÇAISE PAR L'IFREMER.

Photo: Sławomir Lewandowski

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Sten Suomi got a BWTS with the main equipment arranged in a specially adapted room on the deck. **Photo: Sławomir Lewandowski**

We increase the number of vessels compliant with the BWM Convention

Safe and clean ballast water

Remontowa Shiprepair Yard continues to retrofit ships with Ballast Water Treatment Systems of various types. More and more shipowners, including our regular Clients, have continuously commissioned these services here.

In 2023, Remontowa completed retrofitting a series of Harren Group tankers with BWT Systems. In May, the *Patalya* and *Patea* arrived for repairs.

Patalya and Patea

Let's recall that this Client's first ship, *Patnos*, entered Remontowa last spring. In addition to the main engine overhaul, the purpose of the visit was to install

the BWTS. Subsequently, we successively hosted the tankers *Patagonia*, *Patrona I*, *Patalya*, *Patara* and *Patea*. All of them - except the last one - were also equipped with BWT Systems. It is worth noting that those were among the more complex solu-



tions of this type implemented on ships in our shipyard.

For safety reasons, the most important BWTS tanker equipment is mounted in a specially prefabricated deckhouse or adapted room on the ship's deck, usually in the midship area. On Harren Group vessels, however, the system's heart was traditionally arranged in the engine room, which required piping across the deck to the ballast tanks to be routed.

When *Patalya* and *Patea* returned to Remontowa at the end of May this year, we retrofitted the latter vessel with the BWTS. Thus, she joined this shipowner's other five tankers mentioned above, overhauled at our shipyard within the last year, which received this system here. We also installed a new sea chest on *Patea*.

In addition, the *Patea*'s scope included, among other things, inspections of the shaft line, thruster and overboard valves. We also restored full corrosion protection to the hull by replacing the zinc anodes. The ship also underwent maintenance of the ballast tanks towards renewal of the CAP (Condition Assessment Program) certificate, confirming the ship's good shape based on endurance analysis, detailed in-

spection of the hull and assessment of the tanks' condition.

A similar scope of work on the ballast tanks, related to the CAP certification, was the main task during the overhaul of the tanker *Patalya*, which left Remontowa last year with the BWTS. Other tasks during this ship's most recent visit here were steel replacements and the shaft generator overhaul.

Hafnia Sea

The Hafnia Sea con-ro vessel, owned by Ellingsena Shipping Group, under the technical management of AdMare Ship Management, was another unit retrofitted at Remontowa with Alfa Laval's BWT System. Following access works, we installed the system's equipment in the engine room.

Our teams also overhauled the stern ramp, removing the first three sections of the ramp and replacing all the hinges. The propulsion system overhaul consisted of removing and replacing the liner pins on the rudder blades, reconditioning the two shaft lines and all propeller blades, and removing both hubs.



In 2023 Patea joined other Harren





The Hafnia Sea was retrofitted at Remontowa with Alfa Laval's BWT System.

Photo: Sławomir Lewandowski

Following maintenance of the underwater part of the hull and removal of the old paint, a new ice system coating was applied to the surface. The project's scope was completed by overhauling the shaft generators and coolers and replacing some sections of pipelines. The decks and hull plating got some new steel, while the car decks underwent maintenance.

Hinch Spirit

The chemical tanker *Hinch Spirit* was also fitted with the BWT System at Remontowa. In addition, the vessel underwent an overhaul of the propulsion system, including the thruster, rudder stock, shafts and propellers, which blades were reconditioned.

We replaced the shaft and propeller seals. The rudder gear was also overhauled. The cargo pumps underwent a full overhaul, and the onboard cargo system was pressure tested. The insulation on the cargo pipelines was replaced, and the seawater pipes in the engine room received new insulation.

Of the other works, overhauling the outboard valves and the hull maintenance with replacing anodes is worth mentioning.

Sten Suomi

We also install BWT Systems on chemical tankers belonging to the Norwegian owner Stenersen AS, who also technically manages its fleet. Recently those have been: *Sten Suomi* and *Stenheim*, and previously *Sten Nordic* and *Sten Baltic*; the latter we retrofitted already in 2020, during her first visit to Remontowa.

We mounted most of the BWTS piping on those vessels in the ballast tanks. In every case, it required cutting large access openings so that the pipes from 400 mm in diameter upwards could be laid in the tanker's double bottom.

However, we arranged the system's main equipment, such as filters, lamps and flowmeters, on the deck in a specially adapted room amidships.

In addition to having the BWT System installed at Remontowa, the *Sten Suomi* also underwent the standard scope of work associated with her class renewal.

Remontowa has been cooperating with Stenersen AS for many years. As a result, most of its fleet has been hosted at our docks so far. It is worth recalling that we





The chemical tanker Hinch Spirit was fitted with BWTS and underwent extensive repair. Photo: Sławomir Lewandowski overhauled the chemical tankers *Stenberg* and *Sten Frigg* in 2018, followed by the *Sten Skagen* a year later. In 2020-2022, we welcomed as many as ten Stenersen's vessels in our docks, while this year may

turn out to be a record one with six chemical tankers in its fleet that have undergone various projects at Remontowa to date!



We cared for the ballast tanks of Patalya due to the CAP certification process.

Photo: Sławomir Lewandowski



Scrubbers and more

Although the number of ships fitted with scrubbers in the world today is lower than it once was, such projects are still being carried out in shipyards, among which Remontowa has been one for years.

In Q2 of this year, we equipped the ferry *Robin Hood* and the gas carrier *Kapellen* with EGCS.

The ferry Robin Hood

In the case of the first vessel, TT-Line was keen for the project to be completed quickly. To meet this expectation, Remontowa made all preparations well in advance.

The task began long before *Robin Hood* entered the shipyard. That period was

used to prefabricate the new funnels, retrofit them with scrubbers, and plan the entire operation in detail, including the shipyard infrastructure.

As a result, the installation mainly consisted of dismantling the two old funnels and mounting the new ones, which had already been prepared and were waiting on the quay, thus reducing the ferry's stay at Remontowa to the necessary minimum.

Remontowa installed four scrubbers, two in each funnel, using the shipyard's





On the *Kapellen*, the scrubber system was housed in a steel section, previously prefabricated in Remontowa and installed at the funnel.

Photo: Sławomir Lewandowski

floating sheerleg with a lifting capacity of 220 tonnes. To optimise the transport operation and crane installation of the two funnels weighing 200 tonnes on deck on both sides, the vessel was undocked, turned and drydocked again.

In addition, Remontowa mounted Waste Heat Recovery Systems, which entailed adding four more boilers and a large amount of piping.

The scrubber room was specially erected on the ferry to house all the equipment that operates the scrubber pumps, the WHR system pumps, and the turbines recovering heat from the steam and transforming it into electricity.

Once part of the bottom plating was cut out, we fitted the ferry with new sea chests. A diesel fuel homogenisation system was also mounted into the ferry, which involved a lot of piping work.

A major job also affected the stern ramp, where the hinges and all the pins were machined. A second floating crane dismantled the ramp while the first sheerleg mentioned above was installing the new funnel with the scrubber inside.

Robin Hood is not the first TT-Line-operated ferry refurbished on our docks. We have previously hosted *Tom Sawyer, Huckleberry Finn*, and, more recently, *Marco Polo*.

The Belgian gas carriers

The second vessel retrofitted with scrubbers at Remontowa in Q2 was the gas carrier *Kapellen*. She entered Remontowa in May with her twin ship *Koksijde*, but we did not install the system on the latter.

The Belgian shipowner Exmar, whose domain is transporting liquefied gas products (liquid petroleum gas, butane, propane, anhydrous ammonia and chemical gases) by sea, has successfully renewed its LPG fleet at Remontowa for several years. Recent examples include the gas carriers Magdalena, Elisabeth, Joan, Knokke, Libramont and Kontich.

Kapellen and Koksijde underwent their first class renewal here. The scope of work

was quite similar for both. It included, among other things, overhaul and load testing of the davits, replacement of ropes and hoses, testing of the cargo condensers, boiler overhaul and testing of the safety valves on the cargo line tanks.

While the gas carriers were in the dock, seal measurements were conducted, as well as main engine overhauls and a large scope of work on several piping systems. Repairs to the cargo tanks included replacing the brackets with new ones made of low-temperature steel.

In addition, we retrofitted the *Kapellen* with a scrubber. The system and equipment were housed in a steel section, previously prefabricated in Remontowa and installed at the ship's funnel in the aft area. Our electricians handled the power supply and connection to the scrubber system.

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Remontowa prepared all structures before the ship's arrival to retrofit the *Robin Hood* with scrubbers quickly. **Photo: Sławomir Lewandowski**

The ferry was retrofitted with new funnels, which had been earlier prefabricated and waited on the quay, thus reducing the ferry's stay at Remontowa to the minimum.

Photo: Sławomir Lewandowski





80-958 Gdansk ul. Na Ostrowiu 1 Poland

biuro@remontowaholding.pl

www.remontowaholding.pl

Board

Chief Executive Officer **Michał Habina**

Chief Commercial Officer Marcin Seroka

Chief Commercial Officer Marek Sokołowski

Chief Production Officer Sławomir Ostrowski

Commercial Offices

SCANDINAVIA, SINGAPORE

Denmark, Finland, Norway, Sweden, Singapore Director: Marcin Mądrala phone: (+48 58) 307 23 01 fax: (+48 58) 307 19 10 mobile: (+48) 515 178 047 e-mail:

Marcin.Madrala@remontowa.com.pl

SHIP CONVERSIONS

Director: Krzysztof Mądrala phone: (48 58) 307 25 46 mobile: (+48) 502 160 176 e-mail:

Krzysztof.Madrala@remontowa.com.pl

UNITED KINGDOM, IRISH REPUBLIC, FAR EAST

Director: Dawid Piaskowski phone: (+48 58) 307 24 32 fax: (+48 58) 301 12 81 mobile: (+48) 515 087 260 e-mail:

Dawid.Piaskowski@remontowa.com.pl

GERMANY, NORTH & SOUTH AMERICA

Manager: Karol Buczkowski phone: (+48 58) 307 23 66 mobile: (+48) 503 681 887 e-mail:

Karol.Buczkowski@remontowa.com.pl

WESTERN EUROPE

France, the Netherlands, Belgium, Luxemburg Director: Piotr Kubicz phone: (+48 58) 307 19 64 fax: (+48 58) 307 19 10 mobile: (+48) 603 069 802 e-mail:

Piotr.Kubicz@remontowa.com.pl

ITALY, CROATIA, Monaco, Switzerland

Manager: Kamil Tamborowski phone: (+48 58) 307 17 69 mobile: (+48) 511 859 197 e-mail:

e-mail: Kamil.Tamborowski@remontowa.com.pl

GREECE, CYPRUS, TURKEY

Greece, Cyprus, Turkey,
Portugal, Spain, Algeria, Marocco
Manager: Aleksander Walewski
phone: (+48 58) 307 26 85
fax: (+48 58) 301 12 81
mobile: (+48) 508 394 732
e-mail:

Aleksander.Walewski@remontowa.com.pl

POLAND, CZECH REPUBLIC, SLOVAKIA

Manager: Piotr Radtke phone: (+48 58) 307 16 23 fax: (+48 58) 307 19 10 mobile: (+48) 515 170 837 e-mail:

Piotr.Radtke@remontowa.com.pl

EASTERN EUROPE

Ukraine, Lithuania, Latvia, Estonia Manager: Jacek Połom phone: (48 58) 307 12 53 mobile: (+48) 502 160 175 e-mail:

Jacek.Polom@remontowa.com.pl

NAVY UNITS, STEEL STRUCTURES

Manager: Arkadiusz Kieda phone: (48 58) 307 14 26 fax: (48 58) 307 11 39 mobile: (+48) 509 905 429 e-mail:

Arkadiusz.Kieda@remontowa.com.pl

www.remontowa.com.pl