



TIEFGANG#15

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NO TIME FOR TIDES



PHOTO: BJÖRN LÜBBE

Container Terminal Wilhelmshaven is the only deep-water port in Germany to have unrestricted access at all times – ships arriving and departing do not have to watch out for high and low tides. This saves everyone involved a lot of time and money. And the Boluda shipping company’s tugboats are always by their side.

Even people who have been working at the port a long time can't get enough of this image: A gigantic container freighter reaches the North Sea coast near Wilhelmshaven after a long voyage across the oceans and prepares to dock at the quay of Container Terminal Wilhelmshaven. Compared to these vessels, which can be up to 400 metres long, almost 60 metres wide and more than 65 metres high, the tugboats, which are there to support every docking and casting off manoeuvre, seem almost tiny. But with their powerful engines and complex technology,

they bring even the largest ships safely into their final position or set them on their way.

These powerhouses are steered by people like Ann-Kathrin Bruns. For around ten years she has been doing the job that she knew would become her vocation even before she began studying nautical science.

For TIEFGANG, we accompanied her and the crew aboard the “RT Pioneer” during a manoeuvre with the

“Edith Maersk”. Built in 1999, the tug sails under the flag of the Netherlands, the home country of the Boluda shipping company. Container Terminal Wilhelmshaven is bustling with activity; the container ships docked close together on the quay. Then Ann-Kathrin Bruns is given the command to depart.

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“I think it’s not only a good idea, but absolutely necessary for German ports to reflect on their strengths and face European and international competition together, without competing with each other if possible.”

Claudia Müller, German Federal Government Coordinator for the Maritime Economy and for Tourism

PHOTO: ARNE JESCHAL

THREE
QUESTIONS
TO . . . *Claudia Müller, German Federal Government
Coordinator for the Maritime Economy and for Tourism*



PHOTO: ARNE JESCHAL

With your appointment as the German Federal Government Coordinator for the Maritime Economy and for Tourism, you announced that you would support the industry on its way out of the COVID-19 crisis and towards climate neutrality and sustainability. What does that mean precisely for the port industry?

The ports have a prominent role to play on our path to climate neutrality. The importance of ports as energy hubs will continue to increase, because Germany will remain an energy importing country despite the massive expansion of renewable energies. At the same time, the ports themselves are also ensuring that their own processes become more climate-friendly and sustainable.

Energy efficiency and the use of renewable energies, as well as providing a shoreside power supply while ships are docked, also make the port itself climate-friendly.

For years, there have been calls for greater cooperation between the North Sea ports, especially in container transshipment – do you agree with that?

As coordinator, it is my job to bring different approaches and facilitate a dialogue between all the stakeholders. This also applies to the issue of port cooperation. Cooperation is not something that can be imposed.

It is however something everyone can benefit from, if successful. That’s why I think it’s not only a good idea, but absolutely necessary for German ports to reflect on their strengths and face European and international competition together, without competing with each other if possible.

The maritime industry is international. Europe is also hoping to develop a joint maritime strategy. What might that look like? What are you currently discussing with the EU Commission?

A unified maritime strategy in Europe is certainly desirable, but also very difficult to implement. The individual member states have differing interests, and the responsibilities of the maritime subsectors in the EU Commission are distributed among different Directorates-General.

However, ensuring fair competition in Europe should be a central guiding principle. On the international market, the survival of the European maritime industry depends on us not competing unnecessarily with each other. This includes making sure that European regulations are applied equally in the member states. I plan to travel to Brussels in May. I can assure you that I have a long list of topics for discussion

Claudia Müller, originally from Rostock, has been a member of the Bundestag for Bündnis 90/Die Grünen since 2017 and is the German Federal Government Coordinator for the Maritime Economy and for Tourism. She is also a member of the Defence Committee. Before embarking on a political career, the mother of two studied international business administration at Stralsund University of Applied Sciences and worked as a freelancer in the tourism sector from 2000 to 2011. From October 2012 to February 2018, Claudia Müller was state chair of the Mecklenburg-Western Pomerania association of Bündnis 90/Die Grünen.



STROKE OF LUCK FOR BOOMING PRODUCT LINIE

Vegan is in. For Rügenwalder Mühle as a pioneer and market leader in this segment, this trend means double-digit growth rates. This is why the family-owned company from Bad Zwischenahn is expanding at the Nordfrost Seaport Terminal in the Freight Village.



PHOTOS: AXEL BIEWER

Every second, the complex thermoforming packaging machine moulds a single sheet of plastic into twelve connected trays on the conveyor belt. In the next step, two vegan cutlets are placed into each tray. Then the machine adds the protective gas that ensures the quality of the cutlets and places an airtight film seal on the packs. Only then are they allowed to leave the clean room and slide through an airlock into the neighbouring room, where the trays are also separated in seconds and stacked on the shelving racks for food retailers. Up to 5,000 individual packages are produced per hour in this way.

“It’s going pretty well,” says Ronny Krüger with typical northern German understatement. He is responsible for packaging at Rügenwalder Mühle and therefore also in charge of the company’s newest location at Freight Village Wilhelmshaven. Mark Bülow, Head of Supply Chain, is also pleased: “At short notice, we found an ideal expansion opportunity for our booming vegan product line at the Nordfrost Seaport Terminal.”

At the end of 2014, Rügenwalder Mühle was the first manufacturer of branded products whose meat alternatives were stocked in supermarkets throughout Germany and has long been the market leader for vegan and vegetarian meat substitutes. “This is where the consumer trust in our expertise in tasty and high-quality products that we have been developing since 1834 pays off,” says Claudia Hauschild, Head of Corporate Communications and Sustainability. Staunch vegans and flexitarians (people who make a point of eating meat only rarely) “do not want to go without the familiar taste experience”, says Hauschild. This has consequences, as Mark Bülow reports: “The growth rates in this product area are 30 to 40 percent per year.” These quantities became unmanageable for the head office long ago. “Our two packaging lines here at Nordfrost Seaport Terminal alone can process up to 140,000 units per week,” says Ronny Krüger.

The search for expansion opportunities proved to be a challenge, especially because of the pace of growth. The fact that the Wilhelmshaven-based frozen food logistics company Nordfrost designed its new location at Wilhelmshaven for growth proved to be a great opportunity for Rügenwalder Mühle. By chance, the Rügenwalder specialists learned about the opportunities at Germany’s only deep-water port, which, in addition to its transshipment operations, also offers perfect logistics connections with its Freight Village. “That really was a stroke of luck,” says Mark Bülow, pleased that the collaboration with Nordfrost has been so speedy and uncomplicated. Rügenwalder Mühle initially rented a total of 1,200 square metres in the large complex.

The possibility to make it happen quickly was not the only decisive factor. “It was just as important for us to work with a company that is very familiar with the food sector,” says Ronny Krüger. This meant it was no problem to divide the premises into a clean room and a packaging room. “You can just tell that the terminal is designed for food logistics,” Krüger and Bülow are pleased to report. Even the required temperatures of 7 degrees Celsius in the clean room and 12 degrees in the packaging room were no problem. Both agree: “We would not have imagined that our requirements could be met so quickly and so well.” When the pace on the packaging line allows, they also enjoy the view of the world’s largest container ships right outside their office windows. “That’s impressive,” says Krüger. “You don’t get to see anything like that on the Zwischenahner Meer.”

THE TIDE INDEPENDENCE ADVANTAGE

Even two years since the start of the COVID-19 pandemic, the global demand for physical goods such as sporting equipment, electronics and furniture is increasing. Transporting these goods across the world’s oceans is lucrative, but also leads to congestion throughout the network. At the beginning of the year, about one tenth of all goods being shipped by sea were on stationary container ships. These vessels should be moving, but are stuck in traffic jams outside major ports. This has benefits for Container Terminal Wilhelmshaven: the shipping company CMA CGM has moved a line to Wilhelmshaven due to bottlenecks at other ports.

Where do we go from here? Assuming Omicron is the last variant that leads to massive curtailment of public life, that is. Demand should start to revert back from physical to intangible goods such as holidays, theatre visits and private celebrations. The number of early bookings for summer holidays abroad has already increased significantly compared to the previous year. Conversely, in the coming years, the huge demand for transport on the container ship network could decline again.

This would see the launch of container ships that were ordered in large numbers in 2021, marking the beginning of a new cycle with low freight rates, which would also create a difficult environment for ports. The cost pressure per container for shipping companies could continue the trend towards larger ships, which could also prove advantageous for Container Terminal Wilhelmshaven. The same is true of the decarbonisation of shipping, which necessitates a reduction in greenhouse gas emissions per container. Container Terminal Wilhelmshaven could thus benefit from larger ships needing to call at a German port independently of the tide.



PHOTO: IFW

VINCENT STAMER

Researcher
Kiel Institute for the World Economy (IfW Kiel)

DELICATE MANOEUVRES WITH A POWERHOUSE



PHOTOS: BJÖRN LÜBBE

They are powerful, skilful, sensitive – and indispensable. The Boluda shipping company's tugboats bring the largest container ships in the world safely to the quay at Container Terminal Wilhelmshaven.

The harbour pilot gives a short, precise command: "Innovation full, Pioneer half." Ann-Kathrin Bruns saw this coming. Twenty minutes before the two stern lines of the "Edith Maersk" slapped into the water, the captain steered her tugboat "RT Pioneer" tight under the towering stern of the huge container freighter so that sailor José da Silva could hand over the heavy hawser to his colleagues on the "Edith Maersk". Now the manoeuvre begins to pull the 397-metre ship away from the quay at Container Terminal Wilhelmshaven by the stern. With deft hands, Bruns brings the tug's three small control levers to "half speed"; at the same time, she steers it with barely perceptible turns on the control elements of the three Schottel engines. With a combined power of 5,100 kilowatts, when they come up to speed, on the bridge it feels as if the tug is flexing its muscles like a high-performance athlete. At the same time, its sister ship "RT Innovation" pulls full speed ahead at the freighter's bow. In slow motion, the heavy hawser lifts out of the water. "Looking good," says Bruns with a relaxed smile.

Next to the ocean liner, the two identical tugboats look dainty. But standing directly in front of them, they reveal their true size: visually, they consist only of hull, superstructure and the "Ridderinkhof winch" on the aft deck. "They're true juggernauts," says engineer Wilhelm Lohmann, who is responsible for the complex technology on board. 32 metres long, 12 metres wide, six metres draught. Three fast-running 16-cylinder diesel engines,

each with 1,700 kilowatts of power, give the "RT Pioneer", commissioned in 1999, the power for 80 tonnes of bollard pull – more than enough to get the "Edith Maersk" moving, which displaces about 220,000 tonnes of water.

Container giants like the "Edith Maersk" depend on help for the few hundred metres at the beginning and end of their journey. "We make sure that these giants can dock and cast off quickly and safely," says Bruns. Today's mission seems like a routine job in terms of the general conditions. The sun is shining over the Jade Bay, there is no wind and there is hardly any current at the Container Terminal Wilhelmshaven quay shortly before the water rises to its highest level. "When there's a proper storm or wind against the current, it looks very different here," says Lohmann. Nevertheless, the crew of three is still one hundred percent focused on the job. "What we do here is not entirely free of danger," Bruns says casually. Even the 54-millimetre-thick wire hawser can break without warning, Lohmann explains. Enormous forces are discharged in a fraction of a second. No one is allowed on deck while the manoeuvre is underway – even José da Silva retreats to the ship's superstructure after the tugboat is connected it with the "Edith Maersk".

Reliability and punctuality are what count when it comes to tugboats. Maersk, Hapag Lloyd, CMA CGM and the other major shipping companies that regularly call at

Container Terminal Wilhelmshaven can rely on the Boluda crews. Half an hour before the agreed time, the “RT Pioneer” has moved into position. “You have to think ahead a little,” says Bruns. First, she pulls the freighter a good distance away from the quay; then she skilfully steers the tug into the gap that has opened up between the ship’s side and the quay wall. “We have to pull the stern around right away so that the ‘Edith Maersk’ can turn,” she explains.

Container Terminal Wilhelmshaven is bustling with activity; container ships are berthed close together on the quay. In Germany’s only deep-water port, ships can dock at any time; they don’t have to pay attention to the tides to have enough water under their keel. For a short time, the “Edith Maersk” lets its own propeller turn at half power to support the turning manoeuvre. The propeller wash briefly pushes the tug off course. But the captain and engineer have already predicted this manoeuvre before the pilot warns them over the radio: “Edith Maersk, propeller half power astern.” While Wilhelm Lohmann keeps an eye on the hawser and could release it at any time by reaching for the brake

lever, Ann-Kathrin Bruns deftly handles the control levers and the plate-sized steering elements. The Schottel engine consists of three propellers under the hull, each of which can rotate 360 degrees: “You can turn the tug on the spot with that,” she says. Like Wilhelm Lohmann, you can sense her enthusiasm for her work. When she graduated from high school, she already knew that she wanted to go to sea. After an internship on a container ship and even before studying nautical science, she decided: “I’m going to work on a tugboat.”

She has been doing the job for about ten years, and without a doubt she and her crew do it well. It barely takes 30 minutes before the two tugs have turned the “Edith Maersk”. José da Silva releases the hawsers connecting the tugs to the freighter. The “RT Pioneer” turns away. The crew are so relaxed you would never notice that they have just been focusing on manoeuvring millions of dollars and thousands of tonnes of steel. The three of them enjoy the peace and quiet in the tugboat harbour. The team is on standby for 14 days, followed by two weeks’ rest at home. “The next job will be along in a few hours,” says Ann-Kathrin Bruns, and you can tell she’s already looking forward to it



Next to the ocean liner, the assistance tugs look dainty.



Maersk, Hapag Lloyd, CMA CGM and the other major shipping companies that regularly call at the Container Terminal Wilhelmshaven can rely on the Boluda crews.



THE FUTURE STARTS NOW



*Automation,
electrification,
digitisation: future
projects are being
driven forward at
Container Terminal
Wilhelmshaven.*



By the end of the year, the 4 kilometre feeder line and the 16 storage tracks in the Freight Village will be electrified.

The Eurogate Group has initiated a technical quantum leap for Container Terminal Wilhelmshaven. The port service provider announced that container transshipment will move from manual operation to an automated system in the coming years. The automation process began in January, and around 150 million euros will flow into the project over the next three years.

First, the existing infrastructure will be expanded: the eight gantry cranes will be raised, and unpaved areas in the north of the terminal will be asphalted. 2023 will see the delivery, assembly and commissioning of two more gantry cranes. What is remarkable about these cranes is that they will be controlled remotely. Eurogate aims to have the first technically upgraded berth in Wilhelmshaven ready for operation as early as 2024.

In April, a research project was also launched to set up a digital test site where standard camera systems in ports are linked with special OCR/Deep Learning technology. This will create various testing opportunities for innovations in Logistics 4.0 and traffic management in Lower Saxony's ports. Sub-sites that interact to form a cross-port digital test site are to be set up in the ports of Brake, Cuxhaven, Emden and Container Terminal Wilhelmshaven.

The interaction of the various camera systems with OCR technology creates test opportunities to optimise data accuracy and goods handling in rail transport in connection with port processes. In the further course of the project, ship and road transport can also be integrated so that the entire logistics chain is incorporated.

"RaDaR4.0" is a research project run jointly by Container Terminal Wilhelmshaven JadeWeserPort-Marketing GmbH & Co. KG and Niedersachsen Ports GmbH & Co. KG. The project is sponsored by TÜV Rheinland; the Federal Ministry of Digital Affairs and Transport (BMDV) is providing funding of 2.5 million euros for the project from the "Digital Test Sites in Ports (DigiTest)" programme, which runs until mid-2024.

The 4 kilometre feeder line and the 16 storage tracks at Container Terminal Wilhelmshaven are also due to be electrified. Rail Power Systems, based in Munich, has been commissioned to undertake the implementation planning and construction. Work on the expansion of the infrastructure between the Ölweiche junction and the port, costing approximately 7 million euros, will begin mid-year and should be completed in time for the timetable change in December 2022 – coinciding with the electrification of Deutsche Bahn's Oldenburg-Wilhelmshaven main line.

"This completes the rail infrastructure of Germany's only deep-water container port," says Andreas Bullwinkel, Managing Director of Container Terminal Wilhelmshaven JadeWeserPort-Marketing GmbH & Co. KG, which awarded the contract. "We are delighted that this will conclude the expansion of the entire railway line between Oldenburg and Wilhelmshaven."

PHOTO: JADEWESERPORT

“MORE AND MORE CUSTOMERS ARE **SWITCHING** TO CONTAINER TERMINAL WILHELMSHAVEN”

Wilhelmshaven is playing an increasingly important role for the Weets freight forwarding company, in large part because truck handling goes so smoothly.

“Processing our trucks at Container Terminal Wilhelmshaven is much more straightforward than at the other German seaports and the western ports,” says Manfred Janßen, head of the container transport department at the medium-sized forwarding company Weets, headquartered in Emden. His deputy Ingo Ruben adds: “We have direct access from the motorway here, and there are plenty of parking spaces for the truck drivers. The staff at the terminal are very professional and help drivers and dispatchers to find a solution quickly if there do happen to be any problems.” The two colleagues agree on one thing in particular: “People at Container Terminal Wilhelmshaven are always accommodating and very easy to work with!”

Janßen and Ruben know what they are talking about. They send more than 200 Weets trucks loaded with containers – mainly pre- and onward carriage to the seaports – out on the road every day. This of course gives them good opportunities for comparison. “The routes to many terminals are constantly congested, which means it can take our drivers a long time to get to them,” Janßen complains. “The infrastructure has simply not grown with the container volumes, which are constantly increasing.”



“I can definitely imagine driverless trucks at Container Terminal Wilhelmshaven.”

JAKOB WEETS
FOUNDER AND MANAGING DIRECTOR



Early on, Weets, which today employs around 500 people, became a versatile logistics service provider that also uses rail and inland waterways. Sustainability plays a major role here. “We try to use a combination of transport modes for all containers,” Ruben emphasises. Of course, that doesn't always work, so for more than five years now the freight forwarder has also been using trucks powered by liquefied natural gas (LNG).

But back to Container Terminal Wilhelmshaven, where Weets has trucks starting and ending their journeys daily. For a major customer from the automotive sector, for example, Weets also makes perfect use of the interplay with rail connections: Empty containers reach Wilhelmshaven by rail, are picked up by Weets drivers and delivered to the customer by truck. After loading, they return to Container Terminal Wilhelmshaven railway station as full containers and then travel by rail again to their recipients.

“The shortage of drivers is just as big a challenge for us as it is for other companies in the industry,” says company founder and managing director Jakob Weets. “However, we have been training our own skilled workers for over 20 years – this is how we are able to recruit two to five professional drivers every year.” Weets received the “Top Training” seal from the Chamber of Industry and Commerce for East Frisia and Papenburg in autumn 2020 for their success with this concept.

If there does turn out to be a shortage of drivers in the future, Weets is already thinking far ahead: the freight forwarder recently took part in the “Truckpilot” research project for autonomous trucks on a Hamburg terminal site. “We could also very well imagine driverless trucks at Container Terminal Wilhelmshaven, especially for journeys from the logistics centre of one of our major customers in Wilhelmshaven to the terminal,” says Jakob Weets. “Participating in the project was a great experience for us, and for our drivers too. Everything went smoothly.”

But while the autonomous trucks of the future may be an exciting prospect, container experts Janßen and Ruben are focused on running the business day-to-day, and on the situation in many seaports. “That does present us with a lot of challenges,” they say in unison. “But we have already noticed that more and more customers are switching to Container Terminal Wilhelmshaven because of the challenges at other terminals – which of course is great news for us!”



“We have direct access from the motorway, and there is plenty of parking for the truck drivers.”

INGO RUBEN
DEPUTY HEAD OF DEPARTMENT
CONTAINER TRANSPORT



“People at Container Terminal Wilhelmshaven are always accommodating and very easy to work with!”

MANFRED JANSSEN
DEPARTMENT MANAGER CONTAINER TRANSPORTS

MORE FREQUENT **SERVICE**

*The rail operator TFG Transfracht has expanded its range of services.
For Container Terminal Wilhelmshaven, this means more connections
to and from the hinterland – and lots of timber.*

The AlbatrosExpress train network is continuing to grow: TFG Transfracht, a subsidiary of Deutsche Bahn, has expanded its services to and from the German seaports on the Erfurt and Großbeeren routes (Berlin/Brandenburg region). Customers will benefit from more flexibility, as the switch to the central hub in Maschen will provide six departures connecting all major loading points in Hamburg, Bremerhaven, Bremen and Container Terminal Wilhelmshaven. At the same time, TFG Transfracht is increasing the connections to Container Terminal Wilhelmshaven from two to four departures per week. In Großbeeren, TFG is expanding its service with an additional round trip and now offers 13 departures a week between Großbeeren and the German seaports.

TFG Transfracht is also increasing the weekly connections on the Dortmund and Frankfurt am Main routes by two departures each and increasing capacities on routes to the German seaports, including Container Terminal Wilhelmshaven. Out of a total of 15 connections to Dortmund, the new import departure takes place on Mondays,

and the new export departure on Tuesdays. In future, there will be 12 trains to Frankfurt, with the new import departure on Thursdays and the new export departure on Sundays.

There is also the new connection to the south of North Rhine-Westphalia. TFG Transfracht has recently started transporting salvaged timber from Siegen-Wittgenstein to Container Terminal Wilhelmshaven. Each train consists of 22 wagons with a total of 44 sea containers, each 40 feet long. The entire train is 670 metres long including the engine and arrives on Mondays with empty containers. These are temporarily stored in Kreuztal near Siegen, while the train is loaded with the filled containers from the previous week. That same evening it leaves the terminal again for Wilhelmshaven. Over the course of the following days, the empty containers are taken by truck to the forests, where they are filled with damaged timber and then transported to Container Terminal Wilhelmshaven on the next train.



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