

### Dear Readers,

The Port of Hamburg is truly an all-purpose port, where a wide range of goods are handled - from grain, cacao, spices and fruit to liquid cargo and extremely heavy project cargo.

However, day-to-day operations at the port go beyond handling and include storage, further transport to and from the hinterland, as well as processing or assembly and disassembly work. All this has a positive effect on Hamburg as an economic hub, as these processes generate substantial added value. Here, the companies in the port and transport sector have devel-



oped extensive know-how, which customers value highly.

The all-purpose port also plays a critical role for future development. It is a fundament pillar of the current port development plan, which naturally takes account of new types of goods, such as alternative energy sources including ammonia. The port companies are also in the process of developing and expanding new fields of business. Evos is a fantastic example of this. The location in Hamburg is ready to start storing and handling carbon dioxide straight away. It only needs to be launched on the market.

Read more about this and many more exciting examples in this Port of Hamburg Magazine. Let yourself be transported into the fascinating world of the port.

Stay curious,

**AXEL MATTERN** 

CEO Port of Hamburg Marketing

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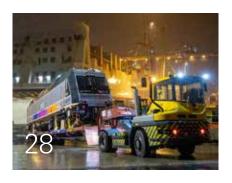


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## **FLEXIBEL & UNIVERSAL**





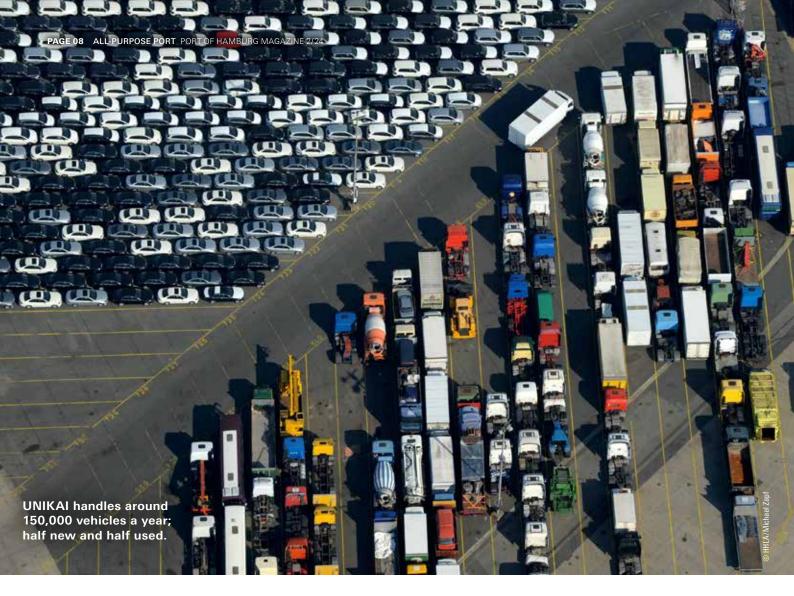
With two HHLA terminals and many different types of goods, the O'Swaldkai port facility perfectly encapsulates Hamburg's all-purpose port.

### BY KERSTIN KLOSS

"Anything that rolls on wheels arrives here," explains Hartmut Wolberg while sitting behind the wheel of a van. The managing director of UNIKAI Lagerei- und Speditionsgesellschaft drives across the 40-hectare terminal grounds, much of which is used for parking: "This is where the trucks arrive, but buses, agricultural machinery and tractor units that look brandnew also come here."

UNIKAI is one of two terminal operators at the O'Swald-kai port facility, where the company – predominantly owned by Hamburger Hafen und Logistik AG (HHLA) – manages around two thirds of the area. At the terminal on the Elbe island of Kleiner Grasbrook, a Grimaldi ro-ro container ship is currently being loaded for West Africa. Among the cargo, three vehicles stacked on top of each other are waiting to be moved. "If you want to ship a





dumper truck like this one, you can put a car or van on top of it – it's really efficient," says Wolberg.

Hartmut Wolberg managing director at UNIKAI Lagerei- und Speditionsgesellschaft



The managing director heads towards the new vehicle department and passes by a number of BMW SUVs, all imported from South Africa for the German market. A transporter for eight cars approaches the terminal. Freshly manufactured export vehicles also arrive on the four railway tracks at the site. UNIKAI handles all new vehicles that Mercedes and VW ship via the Port of Hamburg. Wolberg drives to the brand-new Liebherr cranes that get to the terminal on their own axles: "That's high-tech – our employees need to be qualified to use them." They receive regular training at the company.

Every year, UNIKAI handles around 150,000 vehicles, half of which are new and the other half used. Some of the new vehicles are packed in containers. "We put the vehicles on pallets and lash them in place. We then move the pallets into the container,"

Wolberg clarifies. However, for the most part the vehicles are driven inside the ship via a ramp or loaded on trailers. The port workers need to be adept with spanners and tension chains to double up individually delivered parts before they go on board, or to secure cargo on deck using belts. This work can be seen on the almost 300-metre-long ACL ro-ro container ship, which runs a weekly service to North America.

Carefully, Wolberg drives the van onto the lower deck, where there are crates of cargo that are too large or heavy for containers. The made-to-measure crates are constructed by professional carpenters in the adjacent lashing hall that spans 5,000 square metres. Secured for the voyage on roll trailers, they are strapped to lashing points recessed into the deck floor. "No-one else takes care of these kinds of transport operations at the Port of Hamburg," stresses Wolberg. He points out another speciality outside: Siemens, Bombardier and Alstom insist on having new engines and railcars carefully pulled onto trailers, instead of using a crane. "This means we have to modify the trailers and weld tracks onto them. We have developed a system that allows us to pull railcars and locomotives directly onto the trailer from the track."

Finally, Wolberg takes a turn into a hall where cacao from West Africa is stored. "We're the Swiss army knife at the Port of Hamburg - the all-rounders. There's hardly anything we can't do," he concludes. This also includes the water-side handling of refrigerated containers on behalf of the HHLA fruit and refrigeration centre (HHLA FKZ), which operates around 30 percent of the terminal space at O'Swaldkai. The majority owner is HHLA, and the Belgian terminal operator Sea-Invest holds a 49-percent stake.

"One in four bananas eaten in Germany is transhipped by us," says Axel Hoeckrich, managing director of HHLA FKZ as well as the HHLA forwarding company Ulrich Stein. When he started at the forwarding company specialised in importing tropical fruits in 2007, there were still five banana ships at the quay wall. During the global economic crisis in 2007/2008, container shipping companies discovered the year-round business with high volumes.

"Since 2012, shipcompany ping Maersk has been working together with the fruit importer Fyffes, which has done

**Axel Hoeckrich** managing director at HHLA FKZ and **HHLA-Spedition Ulrich Stein** 



away with its own refrigerated ships," reports Hoeckrich. "Today, we handle about 400,000 tonnes of bananas each year, which come from several producing countries in Latin America."

The HHLA FKZ consolidates banana boxes from the various container terminals at Hamburg, which larger container ships carry up the Elbe. The fight against drug imports plays an important part in these operations. Based on a risk analysis, banana samples have to go through a scanner. "Since there is particular focus on transports from South America, we have the highest scanning rate at the port," he says.





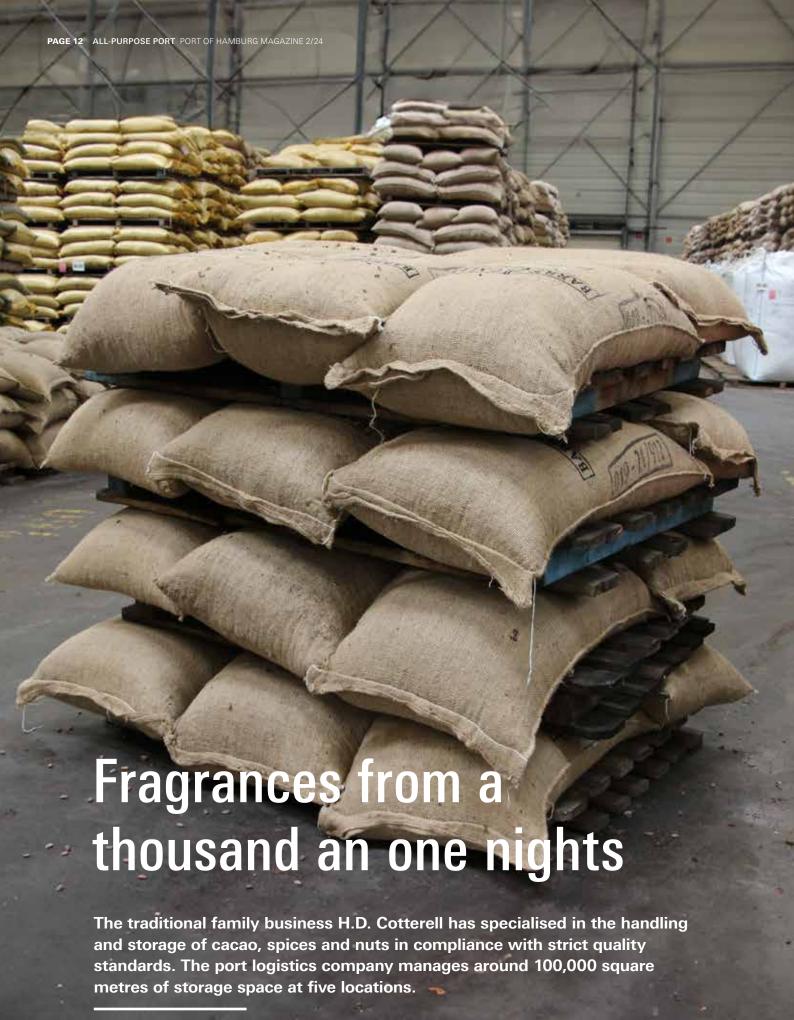
Once the goods have arrived in Hamburg, the forwarding company Ulrich Stein organises quality controls, customs clearance and transport to O'Swaldkai, with environmentally friendly barges where possible. Trucks transport only a limited number of boxes, typically those that are time-sensitive. The sister company HHLA FKZ takes care of the complete physical handling - from acceptance of the container at the terminal, unloading and storage, to the loading of 400 refrigerated trucks per week, each with 24 pallets destined for the retail market. The managing director adds that the average storage period is between three to four days: "Bananas are a fast-moving business." Incidentally, only green bananas are transhipped at HHLA FKZ. Yellow bananas are removed and disposed of, since they would be overripe once they reach the market.

In addition to bananas, HHLA FKZ handles 60,000 to 80,000 tonnes of other, usually seasonal fruit each year, such as apples from New Zealand, citrus fruit from South Africa or grapes from India. At the world's second most important hub for fruit commerce, the company works for multinational importers such as Fyffes, Dole, Del Monte or local companies such as Cobana, as well as directly for retailers like EDEKA and REWE.

Despite the long tradition of fruit handling at Hamburg since the end of the 19th century, there is a high degree of automation at O'Swaldkai today. One example Hoeckrich names is the automatic high-bay warehouse for bananas or the output station called the "Ballerina" because of how quickly it rotates. For "one of the most cutting-edge banana terminals in the world", the lease agreement with the City of Hamburg was recently extended until 2049. ■







Visit H.D. Cotterell at the Port of Hamburg and you will be immediately greeted by the smell of cacao and spices. The family enterprise managed by the fifth generation of owners has been operating at the Port of Hamburg for more than 130 years and has always specialised in the handling and storage of cacao, spices and nuts. "Cacao handling accounts for most of our business," explains Rainer Fabian, who has been managing director at H.D. Cotterell since October 2023 and has worked at the all-purpose Port of Hamburg for 30 years.

Most of the cacao deliveries arrive as bulk goods - in other words, loose in containers by seafaring vessel at the container terminals or at Unikai, where the company manages around 20,000 square metres of hall space directly at the quay wall. Ships laden with bulk cacao also arrive here, carrying up to 15,000 tonnes of the good. The specialists for port logistics - once known as quarter-men and women - unload the cocoa beans using conveyor belts and wheel loaders, and deposit them in a large hall in heaps up to twelve metres high.

Altogether, H.D. Cotterell uses around 100,000 square metres of storage space at five sites at the Port of Hamburg. "We put the cocoa beans into storage, which are later processed into cocoa butter, mass or powder or directly into chocolate by major processors in Hamburg or throughout the EU," he continues. In addition, the company also stocks cocoa products such as cocoa butter and cocoa mass, and supplies the melting facility on the company grounds, which the company owner Thomas Cotterell built years ago and has since sold. The company values having its base at the Port of Hamburg for the short pathways that exist here – from the quay wall to the warehouses and for distribution to the processing industry.

In order to guarantee food safety, H.D. Cotterell is certified according to FSSC 22000, BIO DE-ÖKO-039,

**BIOSUISSE** OR-GANIC and AEO. The company also handles all customs procedures. maintain the quality of the beans, they are stored dry and well-ventilated facilities. The port logistics provider also checks and constantly monitors the quality of

**Thomas Cotterell** Owner of H.D. Cotterell

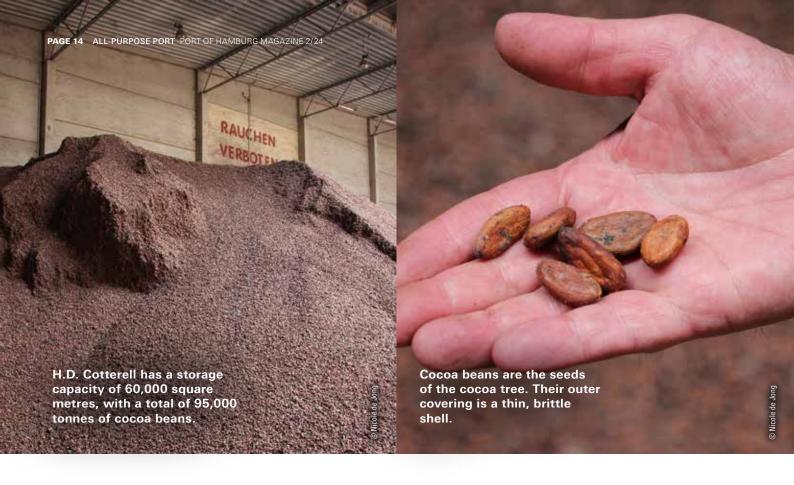


Rainer Fabian Managing Director at H.D. Cotterell



the goods. For this reason, the company is currently acquiring new monitoring equipment that continuously and wirelessly monitors humidity as well as the moisture values of the beans.





The employees of H.D. Cotterell take samples from every incoming batch and carry out bean cuts and bean counts. This means they slice open the beans and analyse them in the company's own lab. What is the condition of the beans? Are they free from mould, pests and other contaminants? How much do the individual beans weigh? Are the colour, odour and flavour acceptable? The port logisticians always have their eyes on the temperature of the goods, since they warm up as a result of a kind of fermentation process which naturally affects the quality. H.D. Cotterell stores 95,000 tonnes of beans over an area spanning 60,000 square metres. This equates to the cocoa content of around three billion bars of milk chocolate. The warehouse is turned over twice a year on average.

"Too much movement during storage is not good for the beans, as they break easily," explains the managing director. Handling with wheel loaders and conveyor belts is relatively rough, he adds, which is why it is important to move the goods as little as possible afterwards. The cacao, which arrives in 60-kilogram gunny sacks, is stacked on pallets and weighed. The goods are typically loaded for distribution without sacks, so these are first opened and the beans are loaded onto the truck loose. However, organic cocoa beans

are exclusively handled in sacks, allowing the neces-

sary traceability of organic produce. The employees

document everything, save the data and send it to the owner of the goods.

"Cacao is very expensive at the moment," Fabian notes. The price has increased about six-fold over the last six months, he says. A tonne currently costs between 7,300 and 8,200 euros – depending on where the beans are sourced. The main reason for the price increase are reduced harvest yields. "Generally, a decline in import quantities is not good for us, as we want to keep our employees and machines busy. But thanks

to our broad positioning, we can compensate for that quite well," he adds. Why the quantities have fallen is not entirely clear. Factors mentioned include weather conditions and changes in the political and economic conditions.

H.D. Cotterell is also currently occupied with the new EU Deforestation Regulation, which is planned to enter into force in January 2025 and requires even more traceability for cocoa. It is intended to reduce worldwide deforestation as well as promote human rights and the rights of indigenous peoples. However, the practical implementation remains unclear for the companies affected. H.D.

Cotterell is therefore actively working on solutions with associations and contributing its experience in these endeavours. Besides cacao, the regulation also applies to beef, coffee, palm oil, rubber, soya and wood, which may in future only be le-



gally marketed in Europe or exported from the EU if they were produced deforestation-free and the laws of the producing country have been observed.

But that's not all. The company specialised in raw food materials manages a further 40,000 square metres of storage space for spices including cardamom, pepper or paprika as well as nuts and ginger. It also stores rice and prepacked spice mixes that are supplied to Asian food stores in Germany. "Just like with cacao, we take good care of our customers' goods, check the quality and complete customs clearance," Fabian explains.

The employees are extensively trained so they know how to take samples and to prevent any contamination with goods in the warehouse, such as with peanuts which can trigger allergies. "We often walk the tightrope between a traditional port warehouse and the standard of hygiene applicable to the requirements of the food processing industry," he says. The employees understand that they bear a tremendous responsibility.

The company likewise handles general cargo such as rubber or wood as well as consumer products. Generally, business runs well. This is also reflected by the fact that H.D. Cotterell is planning to invest in existing properties and to construct a new, bigger hall at the headquarters at Ellerholzdamm. The topic of sustainability is also not overlooked. "We are a carbon-neutral company because we want to be, not because we have to be," Fabian proclaims.

The owner Thomas Cotterell is among the very first to adopt electric cars. The company's vehicle fleet is entirely electric, and most employees now use electric cars. The company has been producing electricity itself for some time – thanks to the photovoltaic installation on the hall roof, which can generate 500 kilowatt peak. This means the company can largely meet its own energy needs in the sunny months of the year. The company has installed 19 charging points for charging electric cars. H.D. Cotterell currently employs around 65 people, who perform challenging and varied work. "And it always smells good here,"

### Where does cacao come from?

Cacao grows close to the equator and most comes from West Africa. The plants need high humidity and plenty of rain. They also require constant temperatures between 25 and 30 degrees Celsius — like the prevailing climate on the Ivory Coast and in Ghana, where two harvests per year are possible. However, cacao also grows in tropical regions in Central and South America as well as Asia.



## Maritime link

Having taken over the Wallmann Terminal, Deufol has consolidated all services at a central location. The logistics company specialised in heavy cargo, breakbulk and project cargo also considers itself a specialist in digital infrastructure.

BY NICOLE DE JONG



The Hamburg location can be seen as closing the gap in the logistics chain of the global service provider Deufol. Especially since the service provider specialised in breakbulk, heavy cargo, project cargo, industrial packaging and IT has taken over the Wallmann Terminal at the port. The multi-purpose seaport hub serves as the maritime link for the company's 90 locations spread across twelve countries. It offers 130,000 square metres of space - 50,000 of which as hall space - as well as four non-railbound mobile cranes that move around the terminal flexibly and can lift up to 400 tonnes of unit weight in tandem.

There is also a 600-metre-long quay with three ship berths, from which the service provider forwards heavy loads around the world by sea. Besides the water link, the terminal includes its own rail connection. Deufol has thus consolidated terminal services and value creation at one location. From heavy crates, assembly and cargo consolidation to packaging and shipping – it all happens at a central location without additional transport within the port. Shipping times have fallen, and there are around 10,000 fewer truck journeys on the port's roads each year.

The cargoes handled by Deufol at the port are large, heavy and often valuable: goods from plant and machinery construction required by customers for projects all around the world. "A client from the north of Hamburg built hammer drills for the offshore and wind industry," explains Dirk Wülfing, Senior Regional Manager Customer Development at Deufol. The components that arrive by land or sea at the Wallmann Terminal are temporarily stored there, fully assembled and then loaded onto seafaring vessels.

Another customer manufactures and packages gas turbines at its factory in Berlin and temporarily Hamburg until they are needed in the respective power station project. In order to move these goods at the terminal, the service provider uses the help of a specialist Hamburg haulier. "Thanks to their hydraulic equipment, it's possible to pick up the turbines - often weighing more than 300 tonnes - and move them into the halls," notes Wülfing.



Deufol has a 600-metre-long quay with three ship berths, from which the service provider forwards heavy loads around the world by sea.

For a company from the bottling industry, Deufol takes care of all services along the supply chain. This includes the disassembly of plant parts as well as transport, storage, consolidation and optimised packing. "We digitally map the customer's entire project beforehand to carry out strategic optimisations and ensure maximum utilisation of the transports," he adds.



stores them with Deufol at Hall 8 in Deufol has four non-railbound mobile cranes that move around the terminal flexibly and can lift up to 400 tonnes of unit weight in tandem.



Deufol considers itself a specialist in physical and digital infrastructure, promoting the fact that it offers everything as a single service provider. It strives to develop individual and international logistics concepts to avoid waste, shorten process times, reduce transport and packaging costs and to increase the profitability and efficiency of its customers. "With our services, we want to make our customers faster, optimise transport routes between their factories and combine loads to avoid excessive handling," he stresses. Everything that leaves the customer no long requires space there and helps to increase the customer's production capacity. "It often makes a lot of sense to have their goods packaged by us - this also helps to free up space at their own factory premises," Wülfing continues.

Thanks to the Wallmann Terminal, which has belonged to Deufol since 2021, it has been possible to continue increasing the real net output ratio for customers. Unlike container ships, breakbulk ships do not always travel along fixed routes; they are sent wherever the corresponding plant parts are to be collected. "We are currently cooperating in a dam project in Laos, for example. Wherever large and heavy goods are needed around the world, that's where we go," he explains. The oversized and heavy loads are transported with the help of roll trailers and moved into the halls.

Digital processing plays a central role here. "We want to make the flow of goods transparent to stop construction sites from grinding to a halt or customers from having to submit new orders," emphasises Wülfing. Particularly in the case of large construction sites, while goods may actually be delivered, they can sometimes be difficult to find on site because they are not clearly identifiable, marked or labelled. "This unnecessarily costs a lot of time and money."

Deufol employs around 60 members of staff who exclusively develop digital solutions. The service provider prides itself in being the only company of its size that has its own complete IT infrastructure for digitally mapping supply chains in a transparent, end-to-end manner. This allows customers to track their goods seamlessly, even when sub-suppliers are involved. For instance, they see where something was purchased and in how many parts the goods will arrive. This in turn enables them to manage their construction site accordingly. This is by no means trivial. After all, site managers often have no idea what is being delivered or they receive parts that are not needed for another six months. "Our tool gives them an overview of the situation."

Deufol does not store all the goods that are shipped at the Port of Hamburg. Since storage space is relatively expensive there, the service provider also uses its domestic locations and has the goods brought to the port just before loading onto the ship. Nonetheless, in some cases, Deufol may store goods in its

halls for a prolonged period if customers have no space for replacement parts or if turbine gears for offshore wind farms need to be available for immediate shipping, for example.

The space is not only expensive, but also limited which Wülfing absolutely sees as a challenge. "We do not have enough space in general and take a critical view when existing space is used for residential development instead of being made available for the port industry to grow," he laments. In his view, it is incomprehensible why former terminal space is used for other purposes, especially when there are fears that loading could move to other ports.

Another challenge he mentions is the labour and skills shortage, particularly in the commercial sector, which not only impacts Deufol and the Hamburg location. To counter this challenge, the company is training industrial packers and forwarding specialists, for example, at its academy in Dortmund, who will later work at the port. Deufol has developed a corresponding staff programme to ensure they remain employees. "The hardest thing is to find people. We have just experienced this in Hamburg: if ten candidates apply for a job, with a little luck two will get an interview. Some don't even show up for the work despite having signed an employment agreement," says Wülfing.

On the other hand, the project logistician believes his company is at an advantage since it offers a niche product and has its own terminal. This is not only important for the company's value creation, he says, but also a trump card in winning over customers. "We can offer the end-to-end service from a single source, with our own infrastructure and our own personnel," he underscores. Customers also have insufficient staff and therefore value efficient communication with just one contact partner, short process times and effective packaging, he adds.

For the customers' large, heavy and bulky products, specially trained Deufol employees develop and produce standardised as well as custom-made packaging - usually made from wood, chipboard and plywood. These are efficient, cost-effective and durable solutions that withstand the forces exerted at sea and the climatic stresses.

Klimaneutral bis 2040

### Wegweiser in eine klimaneutrale Zukunft

### Die Logistik von morgen muss nachhaltig funktionieren.

Die Hamburger Hafen und Logistik AG stellt sich dieser Herausforderung. Denn wir nehmen unsere Verantwortung für Gesellschaft, Umwelt und Mitarbeitende ernst. Als ein führender europäischer Logistikkonzern gestalten wir eine nachhaltige Zukunft der Logistik mit. Dafür organisieren wir Transport- und Datenströme wie auch komplette Arbeitsprozesse neu und setzen auf innovative, energiesparende Technologien.

Eines unserer Ziele:

Spätestens 2040 arbeiten wir klimaneutral.

Hier erfahren Sie mehr zum Thema Nachhaltigkeit







## **The ALL-PURPOSE Port of Ham**



Seaborne cargo handling represents the handling of the terminals at the quaysides quaysides of the Port of Hamburg.

Seaborne cargo throughput 2023:

114,3 million tonnes



Liquid cargo

10,6 million tonnes



Agribulk

6,6 million tonnes



**Grab** goods

19 million tonnes



**General cargo** 

1,2 million tonnes

## burg in figures

Hinterland: 210 trains daily





In 2022,

183.000 tonnes of cocoa came to Hamburg

In 2022,

700.000 tonnes of coffee came to Hamburg





Hamburg handles around

400.000 tonnes

of bananas a year



## Niche tradition

Louis Hagel has been an established name at the Port of Hamburg for decades. The company specialised in handling fertiliser wishes to expand its site.

### BY CLAUDIA BEHREND

While many family businesses worry about finding a successor, Managing Director Horst Hagel would like to grow the port company Louis Hagel. That is because at the 13,000-square metre "small" site at the heart of the Port of Hamburg, maximum efficiency has long been squeezed out of every available square metre. The port handling company has thus been able

to handle around 800,000 tonnes, dispatch a range of ships from all around the world, load and unload various freight trains as well as load around 10,000 trucks in the last year alone.

Although officially founded in Hamburg in 1878, the port enterprise Louis Hagel has actually been around

for longer than that. "My grandfather founded the company back in 1872, but the company was only entered in the commercial register in 1878," explains Managing Director Horst Hagel. Established as a carriage company and expanded to furniture transport several years later, it already began specialising in port handling operations for bulk cargo at Hamburg's inland port in 1900.

At the beginning of the 1920s, a hundred railway cars could be handled in shift work every day. By the Second World War, the capacity of the company had grown tremendously - with numerous stables and furniture depots, around 60 horses, 90 carts and furniture vans, trucks and tractors, ten electric cranes as well as 6,500 square metres of roofed storage space and two commercial buildings. Since then, this important segment for the Port of Hamburg has been reorganised time and again.

For instance in 1968, due to the insufficient depth of the water and the increasing size of ships, the company moved from its former site at Hamburg's inland port to Reiherstieg which offered a water depth of eight metres at the time. This was where dry and liquid bulk cargo - such as grain, coal, fertiliser, ore, oilseeds and feed - were handled over the course of many years. The company has meanwhile specialised in fertiliser.

Originally, however, it wasn't Horst Hagel, but his older brother - 12 years his senior who took over the family business. When he became indebted, Hagel took over the family company at the age of 47; he had previously worked for more than 10 years at Commerzbank as a trained shipping and chartering broker. Hagel then restructured the business and continuously grew it into the company we know today.

A multi-generational business For over 30 years, Hagel has been the third generation to manage the company together with his wife Gisela - and since the 1990s with his daughters San-Reidock, dra Catharina Kunz and his son Philip Hagel. Among the 15 employees in total are two grandchildren,

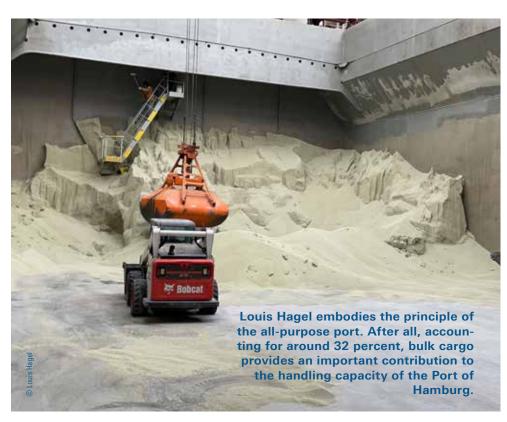
"My grandfather founded the company back in 1872' **Horst Hagel** 

Managing Director at Louis Hagel with Sandra Reidok

now representing the fifth generation However, there is no strict division of tasks at the traditional company. "Everyone does every-thing here," emphasises Reidock.

At 84 years of age, Hagel still works at the company every day and continues to take little holiday. From his office on the first floor of the building, which was extended four years ago, he can look out onto the family business that has developed into the fertiliser terminal today - in large part thanks to him.

During our visit, from the southern window of the office building, he sees a train carrying 1,700 tonnes of fertiliser produced by Domo Caproleuna in Leuna, Saxony-Anhalt. The 26 rail cars contain ammonium sulphate - required in agriculture - that is currently being unloaded by four employees. "On the screen, I can see at a glance whether all the processes are running smoothly," says Hagel. After all, many processes have also long been completely digitised in bulk cargo



handling. "But we still need people to unload the cargo from the trains," Reidock stresses.

The company began specialising in fertiliser in the 1990s. Thanks to German reunification, Piesteritz nitrogen works (SKW) from Saxony-Anhalt could be won over as the first major customer. Their factory is around 400 kilometres away on the Elbe. With a handling contract signed, it was already possible for Hagel to handle enormous quantities for the entire urea export business of SKW in the first few years. As a result, there was soon demand for storage space. "I invested 8 million deutschmarks here in 1998, as I always saw prospects for the future," Hagel explains.

Silo 1 was constructed in 1998. With optimal capacity utilisation, it offers a capacity of around 25,000 tonnes in total with overfill in the four separate boxes. A scraper is used to push the product up to form a material cone in the silo, allowing it to be stored care-



of 40,000 tonnes here for the first time in 2020.



### It is possible to load ships of up to 220 metres in length and 28 metres in width.

fully and without dust forming.

When Hagel looks east out of the window, he can see a 104-metre-long black pontoon spanning 2,400 square metres, which is used for exporting fertiliser. After being constructed in Belgium, it was towed here via the North Sea. The pontoon is called Catharina since it arrived in Hamburg on his daughter's birthday. The company has used it to create a floating quay wall not otherwise found on the premises.

A pipe system that extends 60 metres into the Reiherstieg quay establishes a link to the ship loader with conveyor belts. This can be moved on the pontoon and makes it possible to load ships of up to 220 metres in length and 28 metres in width. The water is 11 metres deep here. A ship was dispatched with a load If Hagel looks further towards Hamburg, he can see a crane mooring for seafaring vessels and inland ships behind. The import business lay dormant for a while as the water depth was no longer sufficient for larger seafaring vessels. However, a win-win deal was reached with the HPA in 2014. The dilapidated embarkment was redeveloped and the construction of a new crane in deeper water was funded. Due to the additional investment of around 5 million euros, seafaring vessels can now also be dispatched here - with water depth of up to 11 metres.

In April 2024, a ship was then dispatched with a 37,000-tonne load for the first time at the crane mooring. With a maximum width of 11 metres and a length of 100 metres, inland ships can tether beside a seafaring vessel beneath the floating crane platform. Incoming goods can therefore be transhipped across vessels, stored in silos as well as loaded into trucks and rail cars after weighing.

Transhipment to trucks, rail cars and container ships For the import business, a 12-tonne grab crane is used to drop goods from a slight height over a hopper at the same height as the crane bridge. In rainy conditions, the hopper can be protected under a moving roof by remote control. The goods are gently transported to a container scale on land via a closed system of conveyor belts, allowing trucks and rail cars to be quickly loaded.

Alternatively, the import goods can be temporarily stored in Silo 3. The concrete silo entered operation in 2014 and features two identical silo cells that can each store up to around 10.000 tonnes of up to four separately sorted types of fertiliser. Together with Silo 1 and 2, this results in a total storage capacity of approximately 45,000 tonnes for fertiliser.

The fact that a silo is empty happens sometimes, but should not be misinterpreted. "Our storage space is continuously booked out by our long-standing customers," notes Reidock. Goods can be stored for any time from a day to six months. "We would like to have more storage space to meet demand from our customers and we would also invest a considerable amount into the location," explains Hagel.

Everyone at the company is proud of the cleanliness throughout the site. However, the corrosive and hygroscopic fertilisers are a challenge to store and handle, as they damage material. "For this reason, we have gradually replaced the normal steel in most construction components with stainless steel, such as the conveyor belt substructure, and parts of the roof structure with wood," says Reidock. But more could still be done: "We could handle three to four times the amount we do currently, and I would also be willing to invest tens of millions of euros in this area," Hagel says. This isn't possible on the current property, he continues, due to the limited space. Hagel is therefore interested in extending the property - a plan also supported by his customers. "Reiherstieg is ideal because it doesn't silt up and its water depth of 11 metres is also suitable for large ships. But we would need more storage space. That is why we have been seeking the approval of the city for a larger site area for quite some time," emphasises Hagel.

His grandson Julian adds: "I have grown up with this company. My great-great-grandfather founded this business more than 150 years ago and I now see my future here. But if we have no possibility to extend our site, there is a danger that Hamburg will lose more handling volume to competing ports. For instance, we dispatched four 30,000-tonners in April that also had other ports of discharge besides Hamburg, such as Antwerpen or Szczecin, because we lack sufficient storage space." ■



## Logistics hub for CO<sub>2</sub>

The Port of Hamburg is ideal for handling carbon dioxide. Evos has already gained many years of experience doing just that.

### BY RALF JOHANNING

The political conversations about carbon capture and storage (CCS) have reached a temporary conclusion. The federal government has decided to initiate a draft bill that will also allow CCS and CCU in Germany. With the draft amendment to the Carbon Dioxide Storage Act (KSpG), the federal government primarily intends to create a clear framework for developing CO<sub>2</sub> pipeline infrastructure and enable the offshore storage of CO2. The bill will now proceed to the German parliament and federal council, where it will be subject to parliamentary consultation. As a result, the day draws closer when CCS will be permitted in Germany beyond the research phase. After all, reducing the amount of carbon dioxide (CO<sub>2</sub>) in the atmosphere will require sequestering gas underground. Empty oil and gas fields at sea are suitable for this purpose, giving seaports an important new role. Some of the carbon dioxide will be handled here.

CO<sub>2</sub> is already handled at the Port of Hamburg today - as a highly valuable product for the food industry. Evos is a company that has been handing this special carbon dioxide for many years now, operating its own specially procured tanks. "The current setup offers around 1,200 cubic metres of capacity," explains Jörg Bargest, Business Development & Commercial Manager at Evos in Hamburg, "handling operations are mostly automated here."

As soon as ships dock at the bridge, unloading still begins manually. At least the connections need to be made for the unloading process to begin. Everything else runs automatically. This also applies to further transport. The tank truck drivers are equipped with corresponding cards. They take care of the whole process at the filling station independently. "We generally only provide our customers parts of our infrastructure and the space for the storage tanks. Everything

else is organised entirely by the customer," adds Barg-

With a storage capacity of 670,000 cubic metres and nine moorings, Evos is broadly positioned in Hamburg. In addition to conventional petroleum products, Evos is working full-steam on the future. "We want to handle even more biofuels like HVO in the future, but we also have handling operations for green ammonia or methanol and other hydrogen derivatives and carriers firmly in our sights.

What's more, we are already talking to companies about how and in what quantities we could handle carbon dioxide for CCS plants," says Jörg Bargest. "The Northern Lights project in Norway could become an actual use-case." Bargest also believes in the possibility to support future customers in marketing their existing green CO2 in addition to loading fossil CO<sub>2</sub>.

For Evos, the prospects of handling CO<sub>2</sub> for storage in the near future are good. There are not only nine moorings for seafaring vessels. The company also of-

fers its customers excellent handling capacity for inland transport. For instance, the employees patch up to seven

Jörg Bargest **Business Development** Manager and Commercial Manager at Evos



full trains every day. Moreover, there are eleven loading platforms for tank trucks. There would also be space for additional tanks on site. According to Bargest, the current storage capacity for CO2 could be expanded by at least 10,000 cubic metres at any time and connected to the railway network. The area potential on the site, however, scarcely offers any room

for much larger plans. Storage capacity with links to productive railway infrastructure would favour transports from inland regions, as CO2 pipelines would presumably only be available in the medium to long term and also only in certain areas.

Carbon storage is no problem for the professionals at Evos. It would be stored at a temperature of -25 degrees Celsius and a pressure of 15 bar.

The extent to which carbon dioxide will be handled at the Port of Hamburg in the future is also a political question. Pipeline projects have so far been planned with other locations. However, until these plans become reality, the Port of Hamburg offers ideal conditions for handling carbon dioxide with its extensive railway infrastructure and inland ship links. This is es-

#### **Evos in Hamburg**

- 149 tanks with a capacity of 1,000-25,000 m<sup>3</sup> for a total of 670,000 m<sup>3</sup>
- Five bridges with a total of nine moorings
- Ships of up to 250 m, 85,000 dwt and 12.5 m draught
- Seven tank wagon loading facilities for a capacity of up to seven full trains per day
- 11 tank truck loading platforms
- Two connecting lines to neighbouring plants

pecially true for polluters with a direct connection to Hamburg. According to a study by DNV, the volume for Hamburg could reach up to 3.5 million tonnes of carbon dioxide per year in an optimistic scenario. And Evos is ready. ■



Gruber Logistics transported 25 locomotives from Kassel to New Jersey. Weighing around 200 tonnes per engine, there were quite a few obstacles to overcome until the cargo was loaded at the Port of Hamburg.

### BY RALF JOHANNING

Anyone travelling between New Jersey and New York by train may find themselves in a railcar pulled by an engine from Kassel. The 25 "ALP-45DP DualPower" trains built by Alstom have all come a long way. The operation was a mammoth undertaking for Gruber Logistics. This is because the locomotives could not simply be transported to the Port of Hamburg via the German railway network. At 32 tonnes, their axle load

was far too heavy – clearly exceeding the 22.5-tonne limit permissible here. What's more, the locomotives did not fit on the German tracks. The wheel profile and technical parameters in the US are different.

Consequently, the only possibility for transport was by road. "We began planning the logistics a year before the first transport. It tends to be a









rather protracted process until all the approvals and authorisations have been issued for the planned route. This also often delays the start of transport," explains Holger Dechant, managing director for oversized and heavy transports at Gruber Logistics. After all, train combinations of 60 metres in length, around four metres in width and 4.55 metres in height had to be brought to the Port of Hamburg by road.

The first engine could embark on its journey to America in early 2021. During this process, a roundabout near Paderborn had to be modified and a central lane asphalted. "In fact, the ailing infrastructure in Germany meant that only one route was possible – and even then, a lot of work was required to overcome obstacles," emphasises Dechant.

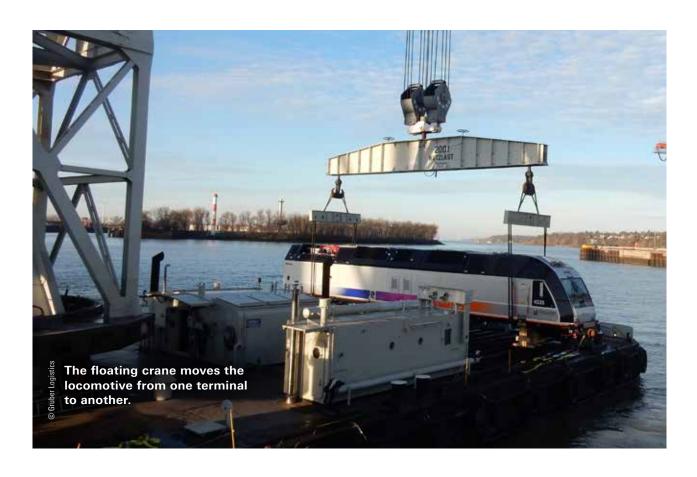
In order to transport the trains, a special low-loader trailer also had to be designed and built. The trailer can be lowered down to two centimetres above the road surface, enabling passage through the low bridges found along the route. The 90-tonne locomotive bodies each needed four nights to traverse the first stage from Kassel to Hamburg – 360 kilometres in total. For inclines and downhill stretches, a second tractor unit was used that could push and brake the trailer from behind.

In charge of organising the transport and unloading at the US port was the logistics specialist Züst &

Bachmeier, a wholly owned subsidiary of Gruber Logistics. StB Verkehrstechnik was responsible for implementing all necessary measures for preparing the route and accompanying the transport with four vehicles in total. The company took care of the road transports exclusively by itself.

Altogether, it took almost three years until all 25 locomotives could be loaded onto ships. "Although we often have to deal with unusual cargo, this was an extraordinary project even for us. Due to the long duration of the project, we had to keep reviewing and updating our plans. The collaboration of our different teams across the companies involved ultimately allowed us to complete this project smoothly. If you take all 25 transports together, we actually circled the earth four times with the engines," notes Dechant.

The engines had to take another diversion on the final kilometres through the Hanseatic city of Hamburg. This was because the Ellerholzbrücke bridge, which leads directly to the Unikai departure terminal, was unable to bear the heavy convoy due to its overall weight of 230 tonnes. The locomotives were thus lifted off the truck at Burchhardkai using a floating crane and carried six kilometres along the Elbe to the departure terminal. Once the locomotives arrived here, they were mounted onto their bogies and then loaded onto a ro-ro ship, which took them the 6,000 kilometres to New Jersey. ■



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## Strong as ever

The HHLA floating cranes have a cumulative age of almost 150 years. When it comes to lifting, they are just as strong as they were on their very first day.

### BY RALF JOHANNING

When heavy cargo at the Port of Hamburg can only reach the ship over the water, this requires the floating cranes of Hamburger Hafen und Logistik AG (HHLA). They first safely lift ship propellors or trains onto pontoons and then onto the ship.

The two cranes that are still in use have been doing this work for a long time now. To be precise, HHLA III commenced service back in 1941. It initially helped in the construction of warships. After that, it aided in the reconstruction of the destroyed port, where the quantity and sizes of the goods handled soon increased again. As the only floating crane that could lift 100 tonnes,



### HHLA IV can lift up to 200 tonnes and itself weighs 2,750 tonnes.

HHLA III was kept busy with a heavy workload. For this reason, in 1957 the Department for River and Port Construction commissioned the construction of a new floating crane with a lifting capacity of 200 tonnes. The crane operates today as HHLA IV.

In the 1960s, ownership of the floating cranes - or simply cranes as we like to call them at the port - was transferred to HHLA. They work as freely rotatable double-jib luffing cranes, and their stable frame ensures horizontal load control. The taller HHLA III can "only" lift 100 tonnes, but at 76 metres in height, it is able to carry loads over a lifting path of 48 metres.

As the youngest crane, HHLA IV has to handle the heaviest packaging units at the port. The more compact giant can lift up to 200 tonnes and itself weighs 2,750 tonnes. Nevertheless, the rectangular pontoon can still be controlled with millimetre precision even when fully laden. Depth-adjustable blades are situated

beneath the propellors of the port and starboard engines, which can perform fine course corrections with the slightest thrust.

To ensure things keep running smoothly over the coming years, HHLA IV was retrofitted last year. "This is the first major retrofit for HHLA IV after seven decades in use," says Stephan Fröhlich, head of floating cranes at Hamburger Hafen und Logistic AG (HHLA), adding: "The project is based on the original construction and circuit diagrams from the 1950s. This work should ensure at least another 15 years of service." The crane has already celebrated its 80th birthday – a prime example of sustainability in practice at HHLA. After all, the construction of a new crane would involve tremendously high energy and material costs for such a large piece of equipment.

The scaffolded and film-wrapped crane body gives away the extensive work being carried out on the special vessel. HHLA III had already removed the cantilever together with mobile cranes in summer 2023. At the time, the movable construction was deposited at the quay in five segments.

The lower link arm lay under a tent with a corrugated iron roof. Protected in the mobile hall, the old steel construction underwent thorough reconditioning. The signs of use and the old paint were removed before necessary repairs were carried out and new corrosion protection applied. The opportunity will also be taken to replace the massive bearings. This work is being carried out on the tower of the self-driving pontoon, protected under cover.

All the effort in reconditioning the crane is worthwhile for HHLA, since the construction dating back to the mid-20th century is still ideally suited to certain tasks at the port. Heavy loads with oversized weights and dimensions are still transhipped at the all-purpose port. This includes ship propellors, which can weigh more than 100 tonnes, as well as the parts of large offshore wind farms. This is where the floating cranes are in their element. They can lift the heaviest loads with extreme flexibility, transport them autonomously and securely stow them on huge container ships. For really big jobs, the cranes can even work in tandem. "The fact that our cranes can turn 360 degrees is almost unmatched in heavy cargo handling at ports nowadays," says Heinrich Proes, outlining the special capabilities of the historic cranes.

This is possible thanks to the classic design: a conical tower in steel framework is firmly attached to the pontoon, which is enveloped by the freely rotatable structure like a hood. The upper section houses the bearings

of the cantilever structure with the lower link arm and the upper link arm. The overall form is rounded off by the cantilever tip at the front and the counterbalance at the rear. In combination, the lower rotating assembly and the tip of the supporting structure absorb the vertical and horizontal forces. A whole battery of slip rings in the heart of the structure ensure electrical energy and control signals are transmitted between the structure and the vessel.

A similar setup can be seen with HHLA III. The floating crane was reconditioned a little earlier in 2023. At the beginning of the year, the high cantilever that towers above most of the port facilities was disassembled, while the rest was sandblasted and painted. Newly manufactured parts arrived from Poland by ship, the heaviest of which weighed 65 tonnes. The upper and lower link arms, cantilever tip and swing arm were unloaded with the help of HHLA IV. The heavy puzzle pieces had to be put back together and assembled on land with mobile cranes, including all wheels, bearings, ladders and steel cables, each of which is four centimetres thick and 500 metres long.

In February, before an audience of inspectors from Germanischer Lloyd and the trade association, the 71-year-old machine then lifted 110 tonnes – ten tonnes more than the normal maximum weight – without any groaning. It continues to meet all the safety requirements. Germanischer Lloyd monitored every step of the repairs and checked all the welding seams and cables.

Soon, the old machines will once again stand together next to huge container ships and load cargo too heavy for gantry cranes. There is plenty of space at Hachmannkai for storing the packaging units. "The location is ideal," notes Fröhlich. "The cranes are situated next to HHLA Container Terminal Tollerort, where we often load heavy cargo onto container ships. Blohm & Voss is located right across from them at the offshore terminal, as is MAN which installs ship diesel engines. Both are customers."

#### Take a look at the oldest floating crane

Two 30-tonners still belonged to the fleet of floating cranes until the 1980s: HHLA I and HHLA II. They were built by world-class Hamburg companies in 1928, neither of which exist today: Deutscher Werft and the crane builder Kampnagel. In 1986, HHLA I was handed over to Ovelgönne museum harbour, where it can still be visited to this day. Back then it was the oldest active crane at the Port of Hamburg and it had achieved more than 100,000 hours of operation. Following extensive restoration work, it was most recently seen at the port's anniversary parade.



## **PORT NEWS**

### Breeze becomes dis

A strong statement for the Hamburg packing location of the duisport Group: BREEZE Industrial Packing GmbH – a competent partner in all matters relating to industrial goods packing – will now be completely integrated into the packing group duisport industrial solutions (dis). "Besides tailored solutions in industrial goods packing and industrial logistics, this also enables us to offer the complete service portfolio of our packing group at our important Hamburg location with its excellent team," says duisport CEO Lars Nennhaus. "With this new structure, we are

creating an extensive offering of all services from a single source."

The change of name is also accompanied by a modernisation of the overall corporate identity – from business cards to signage and work clothing. In other respects, duisport is also focusing on continuity in the Hanseatic city. All general terms of business as well as sales and delivery conditions will remain unchanged. There will also be no changes to how operational management is conducted. (red)

## Experience the world of MSC in Hamburg's historic warehouse district

Anyone interested in getting to know the MSC Mediterranean Shipping Company better now has the opportunity in the historic warehouse district, where the Hamburg office of MSC Germany has been located at Sandtorkai since September 2022. The doors to the vibrant world of MSC have also recently been opened to the public on the ground floor of warehouse L31, right next to the restaurant Vecchio Amore (entrance at "Auf dem Sande 4"). This shipping company invites visitors of all ages to embark on a fascinating journey through its history. The centrepiece of the MSC Group showroom is a genuine, refurbished ship container that can be accessed from both sides. Thanks to interactive screens and the exhibited ship models, visitors can immerse themselves in the development of MSC – from





the beginnings of MSC Cargo in the 1970s to the latest innovations of MSC Cruises and Explora Journeys. Opening the showroom underscores the commitment of MSC to maintaining maritime tradition and advancing innovation. Nils Kahn, Managing Director of MSC Germany, is delighted: "We offer an overview of broad parts of the MSC world in our showroom. It's a place where people can experience and learn about the company culture and the milestones we have achieved in recent decades. We look forward to every visitor." (red) Auf dem Sande 4 / Am Sandtorkai 31 /, 20457 Hamburg

Opening hours: Monday: 12:00 – 15:00 Tuesday – Friday: 12:00 – 21:00 Saturday – Sunday: 13:00 – 22:00

### **NEW MEMBERS**

### **DP World Intermodal GmbH**

DP World has established a European network of 14 inland terminals. The inland terminals are connected to the major European ports by three modes of transport, providing all the additional services necessary. DP World Intermodal has made it its mission to transform the future of supply chains and offer customers optimally integrated end-to-end solutions for the supply chain by becoming the preferred logistics service provider in Europe. In pursuit of this goal, DP Intermodal offers sustainable trimodal transport solutions between seaports

and the main economic regions across Europe. (red)



### **DP WORLD**

### VTG Rail GmbH

Headquartered in Hamburg, VTG Rail GmbH is an international asset and logistics company that specialises in the rail sector. Besides the leasing of rail freight cars and tank containers, the corporation offers multimodal logistics services and integrated digital solutions. The company's fleet includes around 84,000 rail freight cars – mainly tank cars, intermodal cars, standard freight cars, sliding-wall wagons as well as about 5,000 tank containers.

Thanks to its diversified service portfolio, VTG offers customers a powerful platform for the international transport of goods and develops custom-made logistics solutions across all industries. Its specific know-how encompasses the complete transport chain, supported by smart technology. The corporation has many years of experience, particularly in the transport of liquid and sensitive cargo. (red)



## **PORT JOBS**



In 2023, 7.7 million standard containers were handled in the Port of Hamburg. (TEU) over the quaysides. They are the daily working object from Joel. The 20-year-old is currently completing an apprenticeship as an office management assistant at CPS Conpac Port Services GmbH. There he works in export scheduling - he ensures that the containers are made ready for shipment. and transported to the right terminal on time. A challenging task that requires a lot of structure! The most diverse customers with whom he comes into contact on a daily basis. make his work really varied.

Interested? In the new job portal of the Port of Hamburg Marketing you will find numerous apprenticeships and job opportunities in the maritime industry! Start your Search at www.hafen-hamburg.de/de/jobs-karriere/

### Hilcona AG

Hilcona is among the market leaders for fresh, ready-to-eat food products in Europe. Innovation and its pioneering spirit have made Hilcona



one of the most innovative and cutting-edge companies in the food industry. The company combines experience and expertise in food production with powerful, modern logistics, ensuring fresh products every day in Liechtenstein, Switzerland and other European countries. Hilcona supplies customers in retail, food service and the food industry with delicious, fresh products.

The Hilcona story began in 1935 with the founding of the cannery by Toni Hilti. Hilcona took its first successful step into the European market with the production of frozen vegetables and fresh pasta. (red)

### Stefan Kunze enters retirement

### The long-standing representative for Germany East gave the Port of Hamburg a strong voice for almost 15 years.

Stefan Kunze, Head of the Germany East Representative Office at Hafen Hamburg Marketing e.V. (PoHM), enters retirement. Over the years at PoHM, he repeatedly succeeded in positioning the Port of Hamburg region as a logistics hub for industrial and logistics companies from eastern Germany and in strengthening the good reputation of the Port of Hamburg.

During his career, he was particularly concerned with inland shipping and the associated integration of this mode of transport in trimodal supply chains. Back in the 1990s, Stefan Kunze started as branch

director at Deutsche Binnenreederei in Dresden. He then supported the developments in inland shipping until entering retirement. In the last nine years, the trained forwarding specialist was also chairman of the Executive Board of Elbe Allianz. "We will greatly miss Stefan Kunze. He also made his mark in many areas as an inland shipping expert," said Axel Mattern, member of the Executive Board of PoHM, at Kunze's farewell on the Elbe Navigation Day.

The graduated economist also made a name for himself in the implementation of various EU projects. This is also the case for his logistics expertise. For instance, Stefan Kunze was a member of the Logistics Advisory Committee of the Transport Minister for Saxony-Anhalt as well as a representative on the advisory body for developing the overall Elbe concept. "Wherever possible, I will also continue to offer my expertise. But first and foremost, I would like to enjoy my retirement," said

His successor has already been found. Roman Fürtig already began to familiarise himself with the role in January. He is now the new PoHM representative for Germany East and will also handle tasks in the area of inland shipping.



Axel Mattern, CEO of HHM, bids farewell to Stefan Kunze at the Elbe Shipping Day.

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