White paper

TRANSITIONS DEMAND FLEXIBILITY

ROTTERDAM TERMINALS ARE PREPARING FOR THE FUTURE

Port of Rotterdam

Breakbulk in motion

Breakbulk terminals play a vital role in the energy transition and in achieving climate goals. The terminals are indispensable for the raw material transition, both for existing and new cargo flows. Key breakbulk players in the port of Rotterdam are actively preparing for the upcoming changes. They recognise numerous opportunities, as well as challenges.

Breakbulk has a long history in the port of Rotterdam. While the sector was once dominated by conventional cargoes, such as steel, aluminium, wood and machinery, the focus has since shifted. The energy transition is the most significant factor shaping the future of breakbulk terminals in the port of Rotterdam.

The Port of Rotterdam Authority's ambition is to achieve national climate goals and establish itself as the most sustainable port in the world. Breakbulk terminals play a crucial and growing role in this. Their expertise in handling heavy lift and project cargo, essential for sustainable energy projects such as wind farms, the upgrading of the existing industrial cluster, and the development of hydrogen infrastructure, is invaluable to the transition. Breakbulk terminals are playing an increasingly essential role in the raw material transition, both for existing and new cargo flows.

There is a growing trend in the import and processing of recycled metals, plastics and other secondary raw materials. The Rotterdam breakbulk terminals of Broekman Logistics, C. Steinweg - Handelsveem B.V., and Rhenus Logistics are preparing for a sustainable future.

Skilled and qualified personnel remain the most important asset

Although the terminals are actively contributing to the energy transition, one of the greatest challenges lies in a completely different area: attracting and retaining skilled, qualified personnel. Like other sectors within the logistics industry, the break bulk sector is facing issues due to the tight labour market. The growing demand for specialists in logistics, technology, and sustainability only complicates the situation.

Multi-skilled personnel are indispensable. Due to the variety of tasks and cargoes, >>

Peter Pesselse, CEO C. Steinweg - Handelsveem B.V.

"Expertise and know-how are indispensable, especially because the diversified breakbulk cargo is hardly automatable."

Three essential breakbulk players

Rhenus Logistics has two breakbulk terminals in Rotterdam: one at Maasvlakte and one in Waalhaven. Among other activities, the supply and removal of components for Shell's electrolyser at Maasvlakte, as well as for the Portos project – which focuses on capturing and storing CO_2 in depleted gas fields in the North Sea – are routed through Rhenus's terminals. Seaway 7, which is responsible for offshore wind farms, and the Neste biofuels plant are also major clients.

Broekman Logistics focuses on project cargo and heavy lift, particularly for the power and energy industry, which is an essential link in the energy transition. This year alone, several pieces of project cargo were loaded and unloaded at the terminal in Rotterdam Heijplaat and stored in the Heavy Lift Centre using its own overhead cranes. A notable example of this heavy project cargo is a 457-tonne generator stator for the Hinkley Point C project in the UK, which was handled by Broekman Logistics.

C. Steinweg - Handelsveem B.V. (Steinweg), the oldest breakbulk operator in Rotterdam, has nine locations in Rotterdam. They oversee significant transhipment volumes of metals, chemicals and other goods. The service provider is currently managing a major biofuels project for Shell at its terminal in Botlek. Steinweg previously decided to redevelop its container terminal in Waalhaven into a breakbulk terminal. With 47 hectares of land, a 1.5-kilometre quay and a depth of up to 14 metres, the site offers ample space.

>> it is nearly impossible for break bulk terminals to further automate their operations. 'Qualified personnel are, and will remain, the most important asset,' says Peter van der Steen, Managing Director at Rhenus Logistics. The service provider engages with various consultation bodies to attract and retain the right talent. 'However, the solution has not yet been found, highlighting the complexity of the challenge,' Van der Steen says.

Peter Pesselse, CEO of Steinweg, and Rik Pek, CEO of Broekman Logistics, share that opinion. 'Expertise and know-how are indispensable, particularly because the diverse break bulk cargo is difficult to automate,' Pesselse notes. As a board member of the Educational Information Centre, he strives to inspire and motivate young people to pursue careers in the port of Rotterdam. Broekman, like the other terminals, collaborates closely with knowledge and training institutions in the region. "From operational training courses, such as at STC, to highly educated young professionals from Erasmus University, we offer internships and launch annual traineeships for graduates." says Pek. "The fresh perspective of students regularly provides valuable insights."

The energy transition drives growth in project and heavy lift cargo

Broekman has divested its multipurpose break bulk terminal and is concentrating on project cargo and heavy lift, supported by the expansion at Rotterdam Heijplaat. 'That aligns better with our strategy,' Pek explains, 'in which we aim to focus more on markets where we can provide greater value through our services. This includes the industrial markets as well as the machinery and chemical markets.'

At Rotterdam Heijplaat, Broekman specialises in stevedoring, storage, and the assembly of heavy, complex, and valuable cargo, including industrial equipment and components for the power and energy industry. They take place through the terminal, as well as the adjacent Heavy Lift Centre, which is housed in the old warehouses of the former RDM shipyard. Following an acquisition, the terminal was expanded, and the quay length was doubled to 700 metres.

This puts Broekman in a unique position. As the only service provider in Europe, they are capable of lifting loads of up to 700 tonnes to a height of 27 metres inside the warehouse.

'That's urgently needed, particularly as components for power plants and offshore wind farms are becoming larger and heavier,' emphasises Pek. The number of assignments related to the offshore wind farms and power plants is also increasing. Broekman anticipates that this growth will continue in the coming time.

Traditional break bulk goods, such as steel and aluminium, have accounted for the largest volumes over the years. As a result of the energy transition and geopolitical developments, Van der Steen has recently observed an increase in project and heavy lift cargo at the terminals. 'The location of our terminal, near the North Sea, is perfect for these projects. 'More and more, we're becoming the key enabler of the energy transition,' he states.

Peter van der Steen,
Managing Director Rhenus Logistics

"We want to stay ahead of the legislation and act quickly."

Preparing for the future

In order to be well-prepared for the future, the terminals are striving to remain flexible. One way Rhenus achieves this is through the VUCA concept. VUCA stands for Volatility, Uncertainty, Complexity and Ambiguity. 'It's a framework designed to enable the right actions and countermeasures to be taken when a change or challenge arises in the market, often abruptly,' Van der Steen explains. 'We aim to anticipate legislation and stay on the ball.'

In addition, Rotterdam's break bulk terminals are investing in sustainable equipment. That's part of our vision, but it's also encouraged and directed by the Port of Rotterdam Authority,' Pesselse states. Steinweg has equipped its warehouses with solar panels and a significant proportion of the equipment is electric. They recently ordered 120 electric forklifts. A test with an electric reach stacker is currently underway. 'Together with the Port of Rotterdam Authority, we're also reviewing the traffic plan and exploring ways to optimise flow regulation, such as by making greater use of barge ships,' Pesselse adds.

However, the prevalence of short-term contracts within the sector makes it challenging to secure market commitment for what are often substantial investments. 'In today's climate, securing a one-year contract is considered a positive outcome. Fortunately, we also have clients who enter into long-term partnerships,' Van der Steen notes. Those long-term collaborations, in particular, are what make investment in the energy transition possible. For instance, Rhenus invested in a second electric mobile crane to facilitate the clean and energy-efficient handling of project and heavy lift cargo. 'We electrify our equipment wherever possible. But it must be feasible,' says Van der Steen. 'Ambition is important, but if grid congestion brings your operations to a halt, you're ultimately worse off.'

Broekman has observed the same issue, as it faces practical challenges at the former RDM site. 'We invest because we have confidence in the market. However, as we electrify our equipment, our energy requirements also increase. And we aim to meet those needs in the greenest way possible. The grid is powerful enough, but the energy supply is inadequate. Furthermore, the protected status of the cityscape makes large-scale solar panel installation problematic. Regulations make the process of greening quite challenging for us,' Pek explains. As an example, he cites the preparation of one of the sheds at the Heavy Lift Centre for

the assembly of BESS systems – battery-sized containers. These can manage the grid voltage and address network congestion across Europe. 'These batteries must be warehoused, assembled and tested. We've been working for approximately a year and a half to secure the necessary permits. To facilitate the greening of the sector, we must ensure that the necessary investments can be made from the outset, and that major changes are not hindered by the smallest details,' Pek adds.

The three break bulk players agree that the drive for sustainability must never undermine the port's competitive position. 'It's essential that investments in the transition are recouped. This is only possible if all ports in Europe are required to comply with the same rules simultaneously. Then, the market will have no fallback options,' says Van der Steen. Pek adds: 'The Netherlands sometimes tends to get too far ahead of the pack. If we green too quickly, the port of Rotterdam will become more expensive compared to other European ports, placing us at a competitive disadvantage. We need to strike the right balance between ambition and realism.' He advocates for a joint European approach, led by the EU.

Raw material transition changes cargo flows

Alongside the energy transition, the raw material transition also plays a key role for break bulk terminals. It is expected that cargo flows will change. 'Scrap is the new gold," says Van der Steen. "The proportion of scrap added in steel production has increased, partly due to the rise of electric arc furnaces. As a result, the demand for scrap has risen sharply, which could lead to a shortage. While scrap is currently mainly exported, this could decrease in the future."

To avoid and reduce waste streams, Rhenus Logistics seeks to consolidate streams within the group, allowing, for example, scrap to be processed at the break bulk terminals. 'This will enable us to enhance the sustainability of the chain, and vessels will not need to sail empty to another port,' Van der Steen explains. He refers to this as the hybridisation of the chains. 'For this hybridisation, both the legislation and the usage regulations of the port area must be adjusted. The Port of Rotterdam Authority can also play a significant role in this.'

At present, the raw material transition holds less significance for Steinweg and Broekman. Service providers are noticing that more and more clients are becoming involved and are increasingly seeing raw materials that are essential to the energy transition, such as copper and lithium, passing through the terminals. But they are further removed from that issue and mainly aim to serve their clients as effectively and sustainably as possible.

Collaboration is key to success

Collaboration with external parties is crucial for both the energy and raw material transitions. The break bulk terminals work with schools, universities, and manufacturers, for instance, in the development of new cranes. Furthermore, there is close collaboration with the Heavy Lift cluster in Rotterdam. As Pek explains: 'As a port, Rotterdam holds a prominent position in the heavy lift sector, supported by floating cranes, Self-Propelled Modular Transporters and our Heavy Lift Centre. We truly set ourselves apart and have established ourselves as the leading hub for project cargo in Europe, thanks in part to this strong collaboration.'

He characterises the partnership with the Port of Rotterdam Authority as constructive. 'We must ensure that our ambitions remain realistic and that we strike the right balance together. It's important to have ambitions, but the path towards achieving them must remain realistic and navigable. Together, we are now achieving the right balance.'

Rik Pek, CEO Broekman Logistics

"We truly distinguish ourselves and are the place for project cargo in Europe, thanks in part to the excellent cooperation."

In the coming years, the terminals will proceed with the chosen strategy. 'We're closely monitoring market developments and have observed a slight decline in the general cargo and break bulk markets, partly due to high energy prices and challenges in the German automotive sector. Europe is currently experiencing difficult times, and major investments are being deferred. However, this is more of a postponement than a cancellation,' Pesselse states. He identifies opportunities, particularly in the defence sector, where significant investments are anticipated.

'No matter how high the ambitions, without proper preparation, the ship is destined to run aground. It's therefore crucial for all stakeholders in the market, including the Port of Rotterdam Authority, that plans are well thought out. Only when everyone is aware of the impact of measures across the chain and ideas are tested in advance, can the right decisions be made,' concludes Van der Steen.