

Safe.
Reliable.
Relevant.

Largest trans-shipment centre
for crude oil in Germany

Logistics · Storage · Transfer



Nord-West Oelleitung

The flow of crude oil

To date over a billion tonnes of oil have been unloaded and transported by NWO.



Dear Readers,

Petroleum is the driving force behind our daily lives. A life without these oil products, such as petrol, diesel or finally plastic, is hard to imagine. Germany is dependent on imports to meet its daily oil demand. We have been successfully pursuing this challenge since we began operating in 1958.

We are the principal hub in Germany for the handling, storage, and transport of crude oil. To date, NWO has safely handled more than a billion tonnes. We have achieved this success because of our high safety standards and by adhering closely to our principles concerning the safety of the public and protection of the environment. And above all, it is to our team's competence and motivation that we owe all this success. Not even the most rigorous safety requirements are high enough a standard for us: our employees live by our safety concepts and ensure they keep the oil moving along steadily.

We invite you to explore this brochure to know about our company better. You can trace the route of the imported crude oil from seaport to tanker, through the pipelines and to the customer. In a way you will be stationed with us and our employees, and will learn how Nord-West Oelleitung GmbH (NWO) does not simply secure oil supply in northern and western Germany, but does so with the utmost safety.

Sincerely



Managing Director
Dr.-Ing. Jörg Niesch

»The NWO team stands for efficiency, safety, and reliability. With these values we are a guarantor for the German market of the oil industry – in the present day and also in the future.«



Global destination port

Crude oil tankers from all over the world have NWO in Wilhelmshaven as their destination.

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Supply of crude oil

To northern and western Germany

We operate the largest and most important harbour for oil import in Germany. In 1956, two companies joined together and founded Nord-West Oelleitung GmbH for the purpose of construction and operation of the first oil transport company in Europe. Since the beginning of our operations in 1958, we have secured the supply of raw material for a number of oil refineries in northern and western Germany.

A cornerstone of our success is our location in the Jade Bay: a mere 25 nautical miles, i.e. 46 kilometres, lie between the German Bight and our oil harbour. The Jade Bay waters provide a convenient approach for ships by virtue of their width and depth. This means that our port can also be reached by fully-laden tankers to a depth of 21 meters – and this is the only port in Germany where this is possible. At the oil harbour, our core business encompasses trans-shipment, storage, and transit, as well as the safe and environmentally-conscious transport of the crude oil to our customers in the Emsland and Rhine-Ruhr regions, and in Hamburg.



Environment and Transport in Harmony

The largest crude oil import terminal in Germany complies with highest standards in terms of safety.

Unified action

Maximum safety at all times

Responsible behaviour has been our motto ever since the very inception of our company – for over 60 years. This is how we practise a safety standard today which has come even to surpass modern statutory requirements. We wish to continue to maintain this high standard and ensure that it continues to be sustained.

Our shareholders, our customers, and the general public can all trust us and rest assured in their reliance on us.

We oversee the operation of our facilities around the clock. The main focus of our daily activities is centred on avoiding all hazards to human safety and to the environment. Preventative maintenance in addition to comprehensive safety measures, systematic and rigorous safety tests, realistic drill procedures for emergency situations pertaining to fire and water protection, and harbour safety and security are all factors helping us to maintain sustainable and reliable operation. We operate our own modern fire service, which is specially equipped to deal with crude oil. This consists of our own employees, ready for action at any time of day or night.

In our company, safety is a team task: all employees are expected to participate actively, whether in risk prevention, in health, safety and information security aspects or in harbour safety an environmental protection.

In addition, we cultivate active cooperation and the exchange of information with all external bodies and governing authorities. Together we continue to be state-of-the-art in terms of our readiness for every situation.



Stephan Taddiken
Technical Director

»As the world of technology becomes ever more sophisticated, we achieve all the requisite safety, availability, and quality standards through modern maintenance strategies.«

Oil terminal Wilhelmshaven

Germany's hub for crude oil handling

In our facilities in Wilhelmshaven we transfer about 20 percent of all German crude oil imports. Essentially our operating facilities in Wilhelmshaven include:

- Our harbour facility with tanker bridge,
- Our intermediate tank storage,
- Head pumping stations for long-range oil pipelines,
- Relevant technical facilities.

The nerve centre and the command bridge is our remote control centre. From here, we control all our facilities 24 hours a day. Our highly advanced computer system processes and oversees all the complex data and regulates operational and safety engineering. In addition, it provides visual displays of all the processes at work in our facilities. In this way, we can control, optimise, and check how these processes are running.

Once in the oil harbour and at the tanker pier, tankers land the oil. Here begins the journey of the precious raw material through our facilities. Crude oil from all over the world is transported to Wilhelmshaven having travelled all the way from America, Africa, the Middle East, Europe or from the North Sea.



Thomas Getrost
Commercial Director

»Safety and efficiency ensure that we supply our customers promptly.«

Tanker Pier Wilhelmshaven

Modern marine loading arms
with a total output of 40,000
cubic metres per hour are ready
to transfer the oil from tankers.



Stefan Tornow
Operations Director

»Through the sparing use of energy and
with a high degree of innovation, we
ensure a sustainable and safe operation
of our plants.«

Station 1 | Tanker pier

Head to head with today's technology

Our tanker pier stands directly in the waters of the only deep water harbour in Germany and is reached from land via an access bridge. Tankers from all over the world moor here day and night and unload 20 million tonnes of oil annually.

There are three marine jetty facilities on the tanker pier. The ships moor here to unload their cargo. Two of the jetties can empty tankers with a load capacity of up to 130,000 tons dead weight. The other jetty unloads very large crude carrier (VLCC) up to 260,000 tonnes dead weight capacity and occasionally even larger ships. The high technical standard of our loading and unloading systems allows for especially short unloading times whenever the pumping capacity of the tankers is correspondingly high. In this way, the average unloading times rarely exceed 24 hours, even with the larger tankers.

Crude oil transport requires the most stringent safety precautions in order to ensure constant protection of both water and facility safety - especially in the UNESCO protected Saxony Wadden Sea nature reserve. The unloading machinery is consequently equipped with state-of-the-art safety measures and early-warning systems in order to ensure constant prevention of leakage. As a precaution, foam cannons are installed on all the jetties. We also continuously monitor the entire operation on the tanker bridge itself. Nature and technology go hand-in-hand in our company policy and the two represent for us no contradiction at all.



Station 2 | Tank storage facilities

Keeping crude oil well-tended

The crude oil unloaded by means of the jetties is first pumped into our tank facilities, which is connected directly to the tanker pier. The system serves as an intermediate storage space and a buffer that compensates for any irregular arrivals between ship arrivals. This allows the pipelines to be filled with crude oil independently of any unloading operations, using a large tank capacity available.

A total of 35 tanks offer storage capacity for a total volume of about 1.6 million cubic meters. We store various types of crude oil in a way our customers can rely upon, keeping the oil available for immediate retrieval.

Such volumes of crude oil require special safety precautions: the entire tank storage facility is monitored day and night. Our tanks have floating roofs which can lift and lower depending on the amount inside, floating directly on top of the crude oil. Complex sealing systems on the roofs limit all emissions and minimise the risk of fire. In addition, each tank is located in a collection area we call the 'tank garden', which can collect and retain the crude oil when the tank is at full capacity.

Underground pipelines connect the tanks to the tanker pier and the pump stations, the point of departure of the NWO and NDO long-range pipelines by way of remotely controlled junctions. From the tank storage area, all the crude oil eventually reaches the pipelines and sets off on its journey to the consumer.

Station 3 | Long-range pipelines

Maximum safety all the way

The transport of crude oil via long-range pipelines forms our core business. To achieve this, we operate two separate pipelines: our own NWO pipeline towards Wesseling near Cologne, and a second pipeline towards Hamburg which is under the ownership of the Norddeutsche Oelleitungsgesellschaft (NDO).

Both these pipelines are used to transport the crude oil directly and efficiently to the customer refineries. Its journey is a long one: the NWO pipeline to Wesseling alone has a total length of 391 kilometres, including its branch lines. The NDO pipeline is 142 kilometres long.

From the tank storage facilities, the crude oil reaches customers along underground pipelines via the main pumping stations in Wilhelmshaven. Detection systems continually measure the amount of crude oil fed into the long-range pipelines and flowing to its destination.

In order to protect human and environmental health, our workers in the remote control centre employ a complex electronic control system to monitor all technical and safety equipment and effectively 'accompany' the oil to its recipients. In addition, the pipelines are subjected to an internal inspection every six to eight weeks by means of inline inspection tools called 'pigs'. Additionally, safety is ensured by regular walking, driving and flying along and over our routes to oversee and inspect the entire pipeline. Our technical team in Mülheim an der Ruhr supports these activities in the southern section of the pipeline.



Station 4 | Pumping stations

Driving force for the northwestern oil industry

Three pumping stations keep the crude oil in the NWO pipeline moving towards Wesseling. The first of these, the main pumping station, is located in Wilhelmshaven, at the beginning of the pipeline. The crude oil is put under the necessary pressure for its journey. Further along its route, two additional pumping stations, located in Ostwalde and Ochtrup, ensure that this necessary pressure is maintained. There are, after all, over 360 km between Wilhelmshaven and Wesseling. The NDO pipeline requires only one pumping station, located in Wilhelmshaven, because of the significantly shorter distance from here to Hamburg.

By means of our pumps in Wilhelmshaven, we transfer various types of crude oil from the tank storage facilities into the pipelines both day and night in large quantities.



Further Processing

We cover your crude oil needs – sustainably and with safety as an absolute priority

At the end of the journey, the crude oil reaches its final destination the refineries in the Emsland and Rhine-Ruhr regions and in Hamburg who are our customers and at the same time our shareholders:



BP Europe SE in Lingen



BP Europe SE/ROG in Gelsenkirchen-Scholven and Gelsenkirchen-Horst



Shell Germany GmbH in Wesseling



Holborn Europa Refinery GmbH in Hamburg

These refineries produce transport fuels such as petrol, diesel, aviation fuels and heating oil as well as base products for the petrochemical industry, such as plastic or nylon, varnishes, paints and much more. This is why NWO as a company and service provider makes a significant contribution ensuring the continued availability of diverse oil products.



Lars Bergmann
Managing Director of NWO & Company
Representative for Holborn Europa Refinery

»Refineries are dependent on a reliable feed stock supply. With NWO as a partner this has been guaranteed to the oil industry for many years.«



Caverns

Our contribution to crude oil reserves of Germany and Europe

German law stipulates that crude oil reserves for up to 90 days usage must be kept in reserve to meet a crude oil shortage crises situation. Man-made storage spaces known as caverns have been adapted for this purpose using underground salt stocks.

We make an important contribution to the German crude oil market during any crises, although we do not ourselves operate such caverns. Our tank storage facility in Wilhelmshaven supplies underground storage facilities in Rüstringen (Wilhelmshaven) and Friedeburg (Wittmund) with oil via additional pipelines belonging to the operators of the caverns there. It is also possible to deposit mineral oil into the caverns in Epe (North Rhine-Westphalia) via a tank operated by us in Ochtrup. Without our tank facilities, it would not be possible to move a single barrel of oil into or out of these caverns.

In such underground reservoirs are stored huge amounts of crude oil. If necessary, the crude from the caverns is first returned to our tank facilities and is moved from there via the pipelines or by ship to the refineries or to further destinations. NWO can thus contribute to the oil supply in times of crisis.

Facts and Figures

Year of foundation	1956
Start of operation	1958
Number of employees (2017)	136

Shareholder distribution

Holborn Europa Raffinerie GmbH, Hamburg	20.27 %
BP Europe SE, Lingen	25.64 %
BP Europe SE/ROG, Gelsenkirchen	33.69 %
Shell Germany GmbH, Hamburg	20.40 %

Port facilities

1 marine jetty for tankers up to 260,000 tdw
2 marine jetties for tankers up to 130,000 tdw
Access bridge: 670 m
Bridge length: 1207 m

Tank facility

26 tanks with Volume: 30,000 m ³ Diameter: 55 m Height: 13.5 m	9 tanks with Volume: 100,000 m ³ Diameter: 98 m Height: 13.5 m
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Pipelines

North-West Oelleitung: Wilhelmshaven – Wesseling
to supply 4 refineries Lingen, Gelsenkirchen-Scholven and -Horst
as well as Cologne-Wesseling
Length: 391 km / diameter: approx. 71 cm (28")

Norddeutsche Oelleitung: Wilhelmshaven – Hamburg
owned by Holborn Europa Raffinerie GmbH
for the supply of 1 refinery in Hamburg
pipeline operated by NWO
Length: 142 km / diameter: approx. 56 cm (22")



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Foto-Design Klaus Schreiber
cover pictures, personnel portraits,
page 02-10, page 13-16

BP Europe SE
Page 11/12, 17/18, 22

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page 19/20



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