

Hamburg Express Class

A CLEANER FUTURE FOR SHIPPING



DEAR READERS,

Today, we are proud to celebrate the entering into service of the newest ship in our fleet – the “Hamburg Express” – and to thereby open another chapter in the long and proud history of Hapag-Lloyd. This ultra-modern newbuilding – the largest container ship to ever sail under the German flag – is one in a series of 12 ships that underscore our commitment to operating a more efficient, sustainable and future-proof fleet. The “Hamburg Express” class is a key part of our efforts to achieve “net-zero” operation of our fleet by 2045. Thanks to its dual-fuel-technology, it can already be operated with biomethane and e-methane. While LNG (liquefied natural gas) serves as a transitional fuel today, we are determined to switch to non-fossil fuels as soon as they are available in sufficient quantities worldwide.

The ships of the “Hamburg Express” class are being deployed on the strategically important East-West routes between Asia and Europe. Thanks to their size, innovative design and dual-fuel-technology, they will be able to significantly boost efficiency per container transported and to already reduce emissions by 20-25% in the near future.

However, the “Hamburg Express” is more than just a symbol of technological progress, as she is already the fifth ship to bear this proud name.

For us, Hamburg is much more than just the home of our headquarters, as it has also been the home port of our ships for almost two centuries. The city is closely linked to the maritime heritage that has shaped our identity for over 175 years.

We are convinced that the “Hamburg Express” will make a significant contribution to the maritime economy. It embodies Hapag-Lloyd’s role as a driver of innovation and progress in Hamburg, and it upholds our city’s proud heritage as a gateway to the world.

I wish our “Hamburg Express” and her crew always a hand’s breadth of water under the keel, good winds and calm seas on all their voyages.

Kind regards,



Rolf Habben Jansen
Chief Executive Officer of Hapag-Lloyd AG

Berlin Express (2023)
Manila Express (2023)
Hanoi Express (2023)
Busan Express (2024)

Singapore Express (2024)
Damietta Express (2024)
Hamburg Express (2024)
Gdansk Express (2024)

Bangkok Express (2025)
Rotterdam Express (2025)
Genova Express (2025)
Wilhelmshaven Express (2025)

HISTORY OF THE “HAMBURG EXPRESS” AT HAPAG-LLOYD

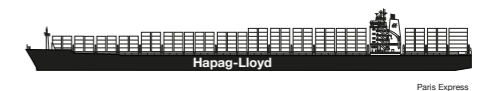
JULY 1972:

Delivery of the first “Hamburg Express”
Capacity: 3,010 TEU
Renamed the “Bremen Express”
in April 1993



DECEMBER 1994:

Delivery of the second “Hamburg Express”
Capacity: 4,422 TEU
Renamed the “Paris Express”
in August 2001



OCTOBER 2001:

Delivery of the third “Hamburg Express”
Capacity: 7,506 TEU
Renamed the “Dalian Express”
in October 2011



JULY 2012:

Delivery of the fourth “Hamburg Express”
Capacity: 13,169 TEU
Renamed the “Dortmund Express”
in September 2022



AUGUST 2024:

Delivery of the new “Hamburg Express”
Capacity: 23,664 TEU
Unique highlight: largest ship with dual-fuel technology sailing under the German flag



ULTRA LARGE VESSEL

The capacity increase of 20% compared with the A19 class leads to greater energy efficiency and therefore lower energy consumption per container.



NAVIGATION AND ROUTE PLANNING SYSTEM

The system is a virtually integrated solution for all aspects of route planning, optimization and monitoring. It enables route planning (from port to port), optimizes the route using weather data and artificial intelligence, downloads the navigation data, and fine-tunes the route as regards waypoints and stages, with the captain maintaining complete control over voyage execution.



WIFI ON BOARD / STARLINK ANTENNA

Starlink, a satellite internet access technology launched by SpaceX, provides the crew with additional bandwidth of up to 250 Mbit/s, making video calls and streaming services possible at sea.



FIRE-FIGHTING SYSTEM

With an output of 250 m³ per hour and a range of 110 meters, the fire hydrants prevent a fire from spreading on the upper deck. To enable effective fire-fighting below deck, the hatch covers are fitted with a built-in fire-extinguishing nozzle system.



HIGHLY EFFICIENT PROPELLERS

Highly efficient propellers manufactured in Germany will help reduce fuel consumption and greenhouse gas emissions.



OPTIMIZED HULL

The hull – including the bulbous bow, propeller and rudder – have been optimized to the specific deployment profile. This reduces emissions by around 3%.



GAS BUNKER STATION

The liquefied gas is bunkered at -160 degrees Celsius. The entire procedure involves cleaning and cooling the pipelines as well as numerous safety checks. Bunkering usually takes around 24 hours and is therefore completed while the vessel is docked in port.

LNG TANK

Due to the lower density of LNG, the tanks are roughly twice as big as heavy-oil tanks. The use of LNG reduces CO2e emissions by 15-25%.

ENGINE ROOM

The MAN B&W11G95ME-C10.5-GI dual-fuel main engine can be operated using both very low sulfur fuel oil (VLSFO) and LNG, as can the auxiliary engines and boilers. One full tank of LNG is sufficient for a complete Europe-Asia-Europe round voyage. Future-proof: the engine can also run on non-fossil fuels, such as synthetic gas.



ONSHORE POWER CONNECTION TO REDUCE EMISSIONS

All vessels in the “Hamburg Express” class can connect to an environmentally friendly power supply onshore, and the auxiliary diesel engines on board can be shut down in port. The connection points are located on both sides of the vessel.





MILESTONES ON THE PATH TO BECOMING A VESSEL

It all began on November 25, 2022; with the first steel-cutting of the "Hamburg Express" at the Hanwha Ocean shipyard in Okpo, South Korea – the symbolic start of the ship's construction. Just under a year later, on December 5, 2023, the keel was laid in the dry dock. The big day finally arrived on March 12, 2024, when the dry dock was flooded and the "Hamburg Express" took to the water for the first time – a significant moment for the team on site and the official start of her voyage.

In June 2024, part of the crew traveled to South Korea to monitor the construction progress on site.

"I flew to Korea at the beginning of June. The ship was still in its 'shell construction' phase, and the next few weeks were devoted to inspecting everything from the weld seams, engines and aggregates to the galley. We checked the quality from the bottom of the keel to the top of the mast," reports Henning Dost, Captain of the "Hamburg Express."

After an intensive construction and preparation period, a seven-day test voyage between South Korea and Japan took place from August 4 to 12, 2024. These sea trials are crucial for confirming the ship's ability to operate.

„We tested all the systems on the 'Hamburg Express,' including the navigation system and the lifeboats."

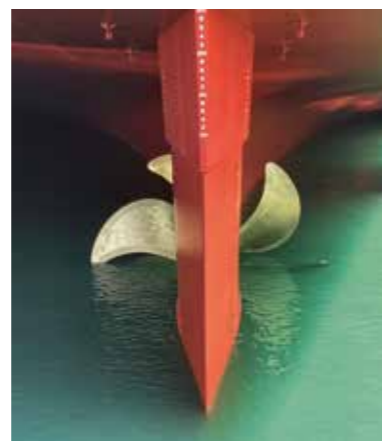
This also included a crash-stop maneuver in which the main engine – with around 95,000 hp – brought the ship up to maximum speed before the command 'Full astern' was given. It took almost 15 minutes for the ship to come to a standstill, a maneuver you ideally only do once – that is, during the test voyage. Our ship passed all the tests with flying colors," Captain Dost adds.

The "Hamburg Express" was officially handed over on August 27, 2024. Despite the challenges posed by two tropical cyclones, "Shanshan" and "Yagi," the maiden voyage was launched.

On August 29, 2024, the "Hamburg Express" began its first voyage in the FE3 Far East service, starting in Ningbo.

Another milestone followed on September 14, 2024, when the first LNG bunkering in service was successfully performed off Kukup, Malaysia.

The highlight of this voyage will come on November 4, 2024, when the christening ceremony of the "Hamburg Express" will be celebrated in the Port of Hamburg. The naming patron will be Eva-Maria Tschentscher, Hamburg's First Lady and the wife of Hamburg Mayor Peter Tschentscher.



From typhoon to christening

You can read what Captain Henning Dost and his crew experienced on the maiden voyage of the new "Hamburg Express" as well as 15 other exciting stories about life on board our container ships in the new book "A ship is only as strong as its crew."

ON THE PATH TO NET-ZERO-FLEET.

Immediate effect of LNG in comparison to diesel:

~ 15 - 25%
less CO2e emissions

up to 95%
less sulfur dioxide

95%
less soot

Future non-fossil fuels, such as green methane, in comparison to diesel:

up to 95%
less CO2e emissions

Dual-fuel technology:

The "Hamburg Express" can operate on green methane, reducing greenhouse gas by up to 95%.

Paving the way for alternative fuels:

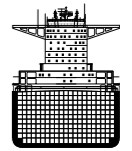
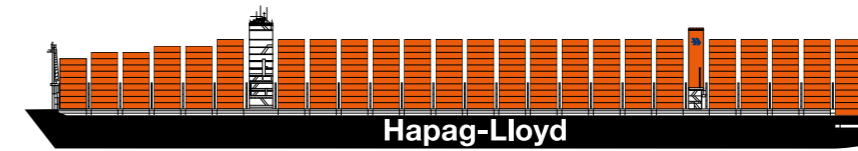
As we transition to future non-fossil fuels, LNG offers a current potential to reduce CO2e emissions by around 15-25%.

Efficiency:

The optimized design of the vessels in the "Hamburg Express" class reduce fuel consumption per transported container by 10-15%, thereby leading to a reduction in greenhouse gas emissions of 20-25% when using LNG.

Net-zero target:

The "Hamburg Express" class will play an important role in helping Hapag-Lloyd achieve its goal of operating a "net-zero" fleet by 2045.



HAMBURG EXPRESS / FACTS & FIGURES

Container capacity	23.664 TEU
Total length	399 m
Total breadth	61 m
Deadweight	224,995 t
Reefer slots	1,500 TEU
Gross tonnage (GT)	229,376
Net tonnage (NT)	108,203



IN COMPARISON:

3x

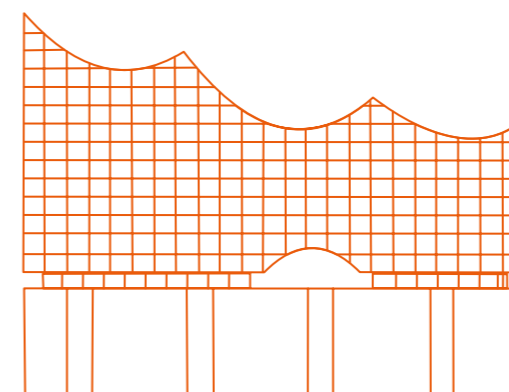
Hamburg's St. Michael's Church (132 m high) could be shipped with the "Hamburg Express."



The Hamburg coat of arms on the bow of the "Hamburg Express" is

3.15 m (high),

or roughly the height of a typical floor in an apartment building.



The Elbphilharmonie concert hall weighs

200,000 t
(incl. foundations)

The "Hamburg Express" weighs more than the Elbphilharmonie when fully loaded (292,000 tons).

**QUOTES ON THE
“HAMBURG EXPRESS”**

**Henning Dost,
Captain**

“As a captain, it’s a great honor to put a newbuilding into service – especially when the ship bears the name of the shipping company’s home port. The ‘Hamburg Express’ represents a further step on the path to safe, emission-free shipping – from the dual-fuel propulsion system and the efficient, optimized stowage and lashing system to the enhanced safety systems on deck. So, it’s an exciting challenge to introduce the crew to the new ship during her maiden voyage and to form a community in which each crew member can contribute his or her knowledge, experience and ideas. Plus, it’s fun to work with this young, motivated crew.”



the ship with LNG. That’s why Hapag-Lloyd has high safety standards, a precise concept, state-of-the-art technology and a well-trained crew on board. In South Korea and off the coast of Malaysia, we bunker several thousand tons of liquefied gas – or enough fuel to bring the ship, crew and cargo to Europe safely.”

**Helena Gramlich,
Officer of the Watch**

“The increase in capacity of the ‘Hamburg Express’ class compared to the other construction classes is huge. The loading and lashing system is tailor-made for our ship. It offers more flexibility and therefore more efficiency when planning and loading in port. Given the high loading capacity that needs to be monitored and checked, it is very important to work closely with the crew both in port and at sea. My goal was to quickly familiarize myself with the new ship when it entered into service and to know the routes.”



**Ansgar Lehmköster,
Chief Engineer**

“Safety on board is always our top priority. This also holds true for technically complex procedures, such as bunkering



**Lennart Dahlke,
Apprentice Ship
Mechanic**

“I’m thrilled to have the opportunity to be part of a maiden voyage during my training period – on one of the newest and most modern ships in Hapag-Lloyd’s fleet. The ‘Hamburg Express’ is really impressive! The engine room, where I spend most of my time as an apprentice ship mechanic, is full of state-of-the-art equipment. I’m learning everything about the maintenance and servicing of the dual-fuel main engine, the boiler, the auxiliary engines and the compressors, and I’m familiar with the gas bunker station and the LNG tank. I think it’s great that Hapag-Lloyd is investing in the future of the fleet and promoting the use of non-fossil fuels.”

**Silke Lehmköster,
Managing Director
Fleet**

“It is our stated goal to do everything we can to drive forward the change of course in shipping and to achieve the



For further questions and information, please contact presse@hlag.com or visit our website.



1.5-degree target of the Paris Agreement. Our investments in new dual-fuel ships and the conversion of five ships to methanol propulsion are important steps toward reducing emissions. On top of that, we are modernizing around 150 ships in our fleet to operate more efficiently in order to reduce greenhouse gas emissions by a third by 2030. As part of this effort, for the long term, we are looking at alternative propulsion systems, such as wind power, and alternative fuels, such as green methane, methanol and ammonia.”

**Dr. Maximilian Rothkopf,
Chief Operating
Officer**

“In addition to embodying state-of-the-art technology and sustainability, the ‘Hamburg Express’ class also sets new standards in operational excellence. Deployed on our strategic Far East-Europe services, these ships will significantly boost transport efficiency while also helping us to fulfill our ambition to be the undisputed number one in quality at the same time. With the ‘Hamburg Express,’ we are making global trade more reliable and environmentally friendly.”





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