



Dear business partners
and friends of our
company,

Marine technology is constantly gaining in significance. Whether in the fields of research, global transport, or the production of regenerative energy – advanced technology is key to progress.

At TECHNOLOG, we consider ourselves part of this development. Our LOGbook is intended to keep friends and partners up-to-date on topics of interest, and projects and developments that our employees are directly involved in, at irregular intervals.

I look forward to your questions and suggestions for improvement!

Best regards from Hamburg,



PS: Please let me draw your attention to our new website. Have a look at

▶ **LNG REFUELING VESSEL**
Next Generation

▶ **SS PEKING**
From New York to Hamburg

▶ **VERSATILE AND EFFICIENT**
MPP Carrier on the Breakbulk

▶ **BACHELOR OF SHIPBUILDING**
Students at TECHNOLOG

▶ **TRADE FAIR DATES**
St. Petersburg und Shanghai

LNG as a propellant for tomorrow's ships – a topic that is being talked about everywhere. Whereas much discussion is going on, Rotterdam and Antwerp are demonstrating what will become the new reality in significant ports: large LNG terminals for deliveries from overseas, feeding into the European gas network, and offloading onto smaller tanker units and the road vehicles. And of course the infrastructure for refuelling LNG-propelled sea- and river-going ships – both from land and using smaller refuelling ships. These bunker vessels will, in turn, supply freight ships with liquefied natural gas, both in harbour and at sea.



Demand for small-scale LNG supply units is growing with the number of cruise liners, ferries and feeder ships that sail the world's oceans on LNG. The need to supply smaller ports without LNG infrastructure, as well as islands and rigs cut off from land supply, and energy plants, will prompt an increase in demand for these ships. This is exactly where TECHNOLOG is concentrating its attention by designing the second generation of LNG bunker ships and LNG shuttle tankers. Within the realms of our LNG@sea activities, we have developed the STREAM 3000 LNG REFUELING VESSEL. Together with the

larger daughters of this design line, with their 7,000m³ capacity, they are extremely flexible and specially designed to supply ships and small land stations. The ships are equipped with type-C pressure tanks with a capacity of approximately 3,000m³. Optionally, atmospheric tanks can be deployed. The modular nature of the design makes it very easy to optimise to the customer's desired capacity. Special attention is paid to the provision of ships with overhanging equipment, e.g. lifeboats. The asymmetric construction enables ships to lie next to one another without the use of transfer pontoons or complex approaching techniques. The transfer crane on the foreship and the highly effective bumper strip on the bow enable

even small landing piers to be reached and supplied, from above. The main manifold is located midships with davits or a transfer arm for supplying and receiving LNG. Special attention was paid to security and manoeuvrability. To reduce risk in case of a collision, the B/5 standard for distance between LNG tanks was rigidly adhered to. Alongside a redundant main engine with Azipods and a tunnel thruster, an automatic bumper system is present. Dual-fuel motors are used for propulsion and electric-energy conversion. There is no limitation on the areas where it can be deployed: with the appropriate ice class, this includes the Nordic regions.

2nd GENERATION OF LNG BUNKER SHIPS
STREAM LNG REFUELING VESSELS

- ▶ Find out more about Stream 3000
- ▶ Find out more about LNG@sea



In recent weeks and months, a consortium between Ingenieurbüro Löll and TECHNOLOG Services GmbH has been working intensively on planning the restoration works of the PEKING for the Stiftung Hamburg Maritim (a foundation that

Voss in Hamburg, was one of the Ferdinand Laeisz shipping company's legendary "Flying P" liners and sailed around Cape of Good Hope under their flag 34 times. From 1932, she was deployed as a stationary training ship with the name

Before that, restoration spanning several years is on the agenda. On account of the price and their approach to concept development, Peters Werft was ultimately granted the contract. The company, operational for over 140 years, has

at the beginning of July. After four days spent loading and thoroughly lashing the historic load, 12 days are planned for the journey back to Germany. She will land at Brunsbüttel Elbe Port, where the PEKING will be undocked. This procedure, the to-

**PROJECT „PEKING“
ACROSS THE ATLANTIC
IN JULY**

TECHNOLOG - a part of it right from the beginning

Peters Werft won the tender for restoration

preserves Hamburg's maritime history) and putting the work out to tender. The shortlist of applicants included Blohm + Voss, Emden Werft und Dock GmbH, Peters Werft from Wewelseth on the river Stör, as well as the consortium Elsether Werft/Bremerhavener Dockgesellschaft. The PEKING, built in 1911 by Blohm +



Ceremonial signature of the restoration contract to the Peters Werft (1)

ARETHUSA in Medway on the east coast of England, serving as a floating college, before being sold and moved to New York in 1975. This is where she has been moored for many years, before being put up for sale. Now she is returning to her home port of Hamburg.



PEKING during transport preparation at the Caddel shipyard, New York

exceptional expertise in the areas of repair and restoration. Peters Werft is expected to be busily carrying out the PEKING's comprehensive restoration until 2020.

wing up the Elbe, through the Stör flood barrier as far as Wewelseth, will be the spectacular culmination of the return.

Before that can happen, the four-mast barque has to be brought safely across the Atlantic. The dock ship COMBI DOCK III from Combi Lift shipping company is already making its way across the Pacific and is scheduled to arrive in New York

TECHNOLOG will also be involved in the building supervision of the SS PEKING in the coming years. The Löll-TECHNOLOG Consortium will fulfil this role on behalf of the owner.

► SMH press release
19 May 2017

PEKING in the Hansa port, Hamburg, end of the 1920s



(1) LTR: J. Matzner, A. Poirier (project managers SHM), J. Kaiser (project controller / board member SHM), L. Biemüller (project manager Peters Werft), M. Detlefs und P. Sierk (management board Peters Werft), H. Radebold (Technolog services, representative of ARGE LÖLL/TECHNOLOG), M. Söhl (managing director SHM)

During this year's BREAKBULK in Antwerp, Belgium, TECHNOLOG presented the 11,000 dwt Multi-Purpose Carrier STREAM LNG 11K MPP LIFTER with its highly flexible loading concept. It is designed to transport a choice of bulk goods, containers, heavy cargo and facilities with special freight areas.

This varied range of deployment options is accompanied by extremely low fuel consumption during operation of the 140-metre-long ship.

A slow-running, two-stroke engine is at the heart of the ship.

Implemented as a dual-fuel motor, a considerable reduction in emissions is achieved by using LNG.

In pure LNG mode, the vessel has a range of 3,200nm – while complying with IMO Tier III.

► Find out more about
STREAM LNG 11K MPP LIFTER

NEW MULTI PURPOSE VESSEL

INTRODUCED AT BREAKBULK IN ANTWERP



As part of his degree in Shipbuilding at the University of Applied Sciences in Kiel, Lou Halter has completed his bachelor's thesis at TECHNOLOG with great success.



H.- J. Voigt CEO TECHNOLOG und Lou Halter

YOUNG STUDENTS AT TECHNOLOG

5 academic theses in recent years
and numerous trainees
from different nations

Within our engineering team, he played a significant role in designing a ship. The requirements to be implemented derived from a customer project. On the one hand, the results of a feasibility study and technical evaluation were the basis of his thesis. On the other, the scientifically grounded results were also contributed to an active tendering process.

Although the precise nature of Mr Halter's work is confidential, we can say this much: it goes without saying that it was related to an LNG-propelled ship.

To ensure that the practical work and the development of a thesis are beneficial for all concerned, collaboration between the

university and industry is crucial. On the University of Kiel's side, Prof. Dipl.-Ing. Meyer Bohe was the responsible contact person. Prof. Bohe's specialisms are ship design, floatability, stability and hydromechanics.

We congratulate Mr Halter and wish him lots of success!

The NEVA in St Petersburg has become the most important trade fair for ship building, shipping and offshore technology in Russia and is the largest forum of its kind there.

St Petersburg
19 - 22/09/2017,
Hall F / Stand 08

NEVA 2017

ST. PETERSBURG, RUSSIA
19-22 SEPTEMBER 2017



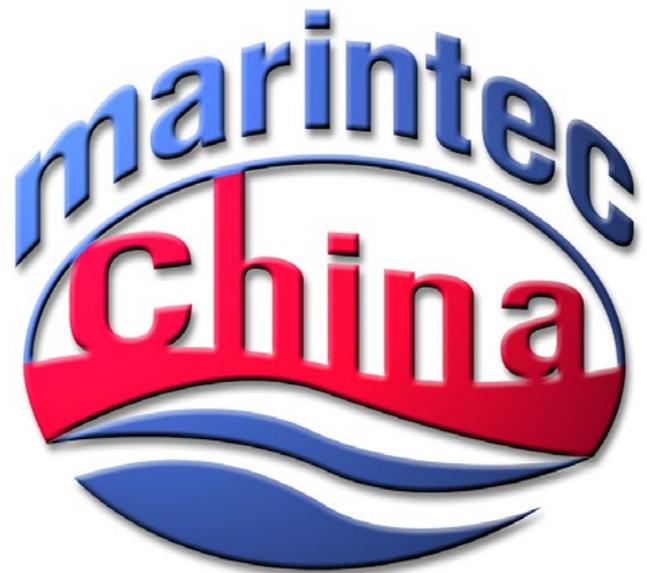
14TH INTERNATIONAL MARITIME
EXHIBITION & CONFERENCES
OF RUSSIA

TECHNOLOG IN RUSSIA AND CHINA

Over the years, the Marintec China has developed into a fair that impressively reflects the size and significance of the maritime market in Asia.

We will be present in Shanghai with our German / Chinese joint venture partner-TECHNOLOG-MRM.

Shanghai,
5 - 8/12/2017
Hall N32 / Stand D31-05



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Needless to say, we would be delighted to receive details of your colleagues or friends who would like to receive our newsletter.

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