

**#LNG #LBG #LEG #FSRU #projects
#2026 #modern #shipyard
#GTT-membrane
#STS #ShiptoShip
#TrucktoShip
#Action #RealAction**

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



LNG technologies

Global growth in vessels using LNG as fuel for reducing emission to air

LBG technologies

Regional growth amongst LNG propelled vessels for mixing LNG with renewable LBG

**QUALITY
ON-TIME
ALWAYS**



LNG – a Highly specialized area

Service and maintenance of LNG tank membranes provided by Gaz-Transport & Technigaz SA (GTT) is a high-competence demanding task that is not for any shipyard.

Extreme focus on handling, safety and cleanliness is required.

As one of few shipyards in Europe, FAYARD, has a **Technical Service Agreement – Repair (TSAR)** with GTT, in securing Owners, the right service infrastructure for the LNG Fleet.

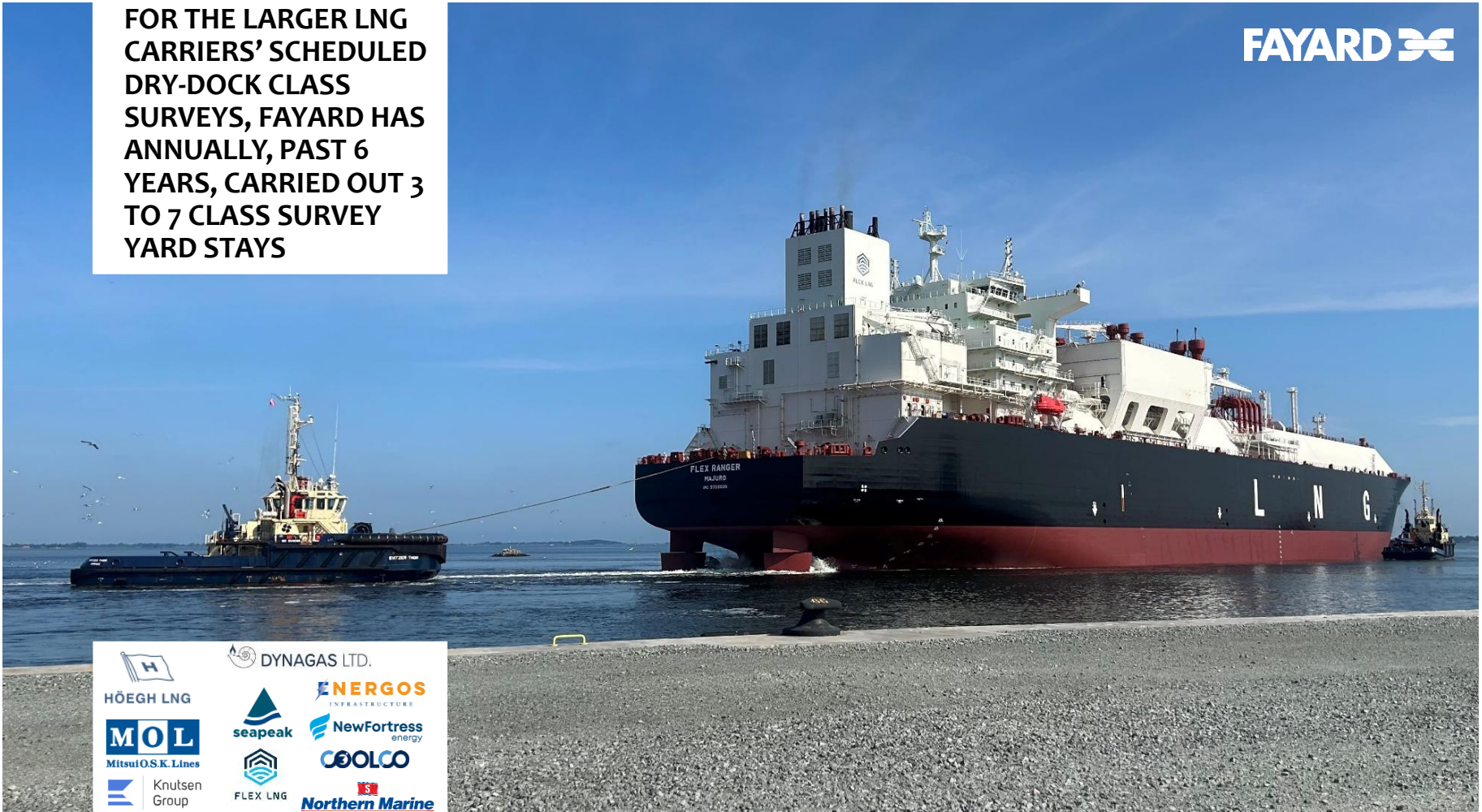
FAYARD is the most northern located shipyard in the GTT service net.

For shipowners this means that not only are technologies for using LNG as a fuel now available.

You can also rest assured that you in FAYARD have an effective partner for service and maintenance of your LNG-fueled vessels, in a North European shipyard located close to the main shipping routes.

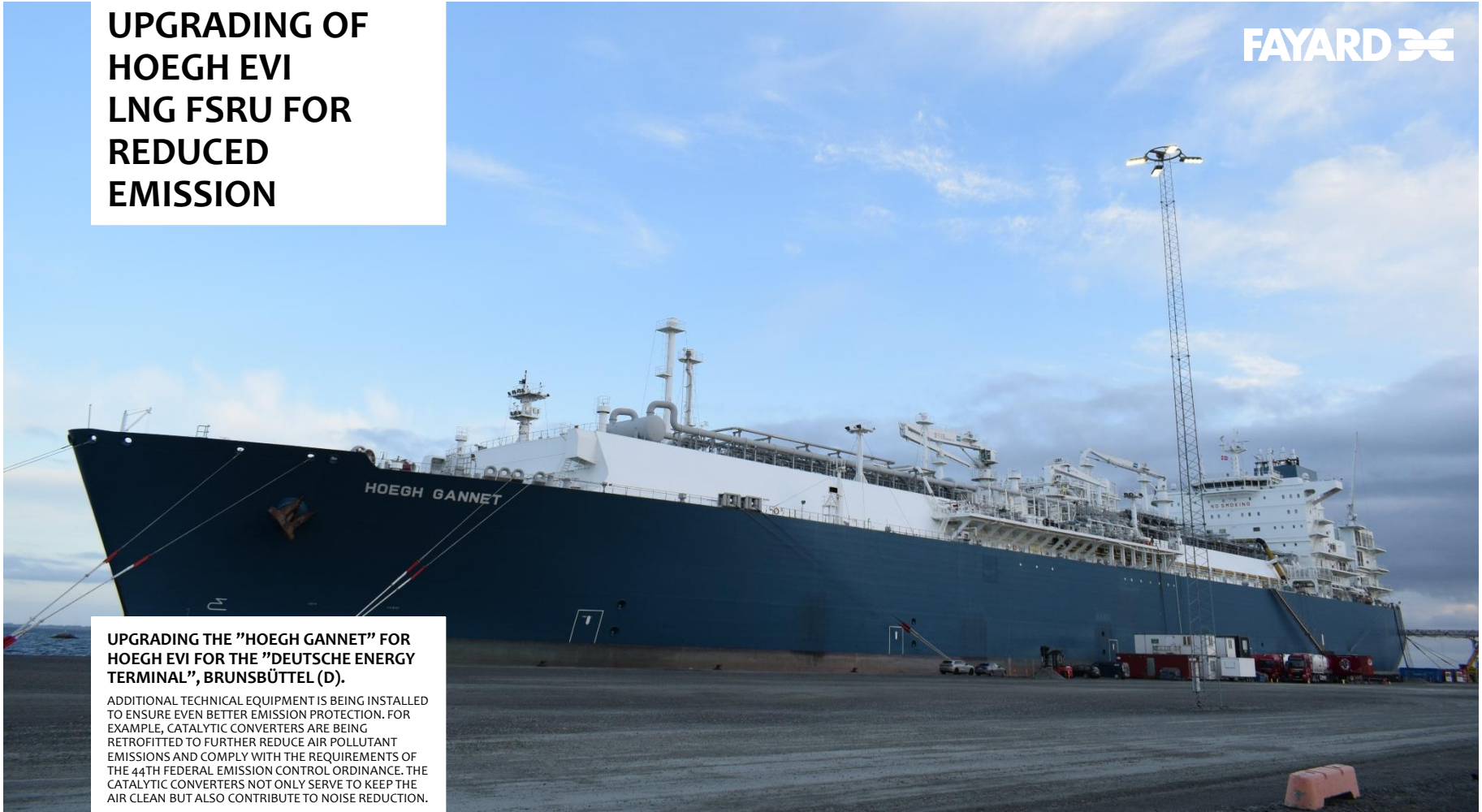
Quality - On-time - Always

FOR THE LARGER LNG CARRIERS' SCHEDULED DRY-DOCK CLASS SURVEYS, FAYARD HAS ANNUALLY, PAST 6 YEARS, CARRIED OUT 3 TO 7 CLASS SURVEY YARD STAYS



 HÖEGH LNG	 DYNAGAS LTD.
 MOL Mitsui O.S.K. Lines	 seapeak
 Knutsen Group	 ENERGOS INFRASTRUCTURE
 FLEX LNG	 NewFortress energy
 Northern Marine	 COOLCO

UPGRADING OF HOEGH EVI LNG FSRU FOR REDUCED EMISSION



UPGRADING THE "HOEGH GANNET" FOR HOEGH EVI FOR THE "DEUTSCHE ENERGY TERMINAL", BRUNSBÜTTEL (D).

ADDITIONAL TECHNICAL EQUIPMENT IS BEING INSTALLED TO ENSURE EVEN BETTER EMISSION PROTECTION. FOR EXAMPLE, CATALYTIC CONVERTERS ARE BEING RETROFITTED TO FURTHER REDUCE AIR POLLUTANT EMISSIONS AND COMPLY WITH THE REQUIREMENTS OF THE 44TH FEDERAL EMISSION CONTROL ORDINANCE. THE CATALYTIC CONVERTERS NOT ONLY SERVE TO KEEP THE AIR CLEAN BUT ALSO CONTRIBUTE TO NOISE REDUCTION.

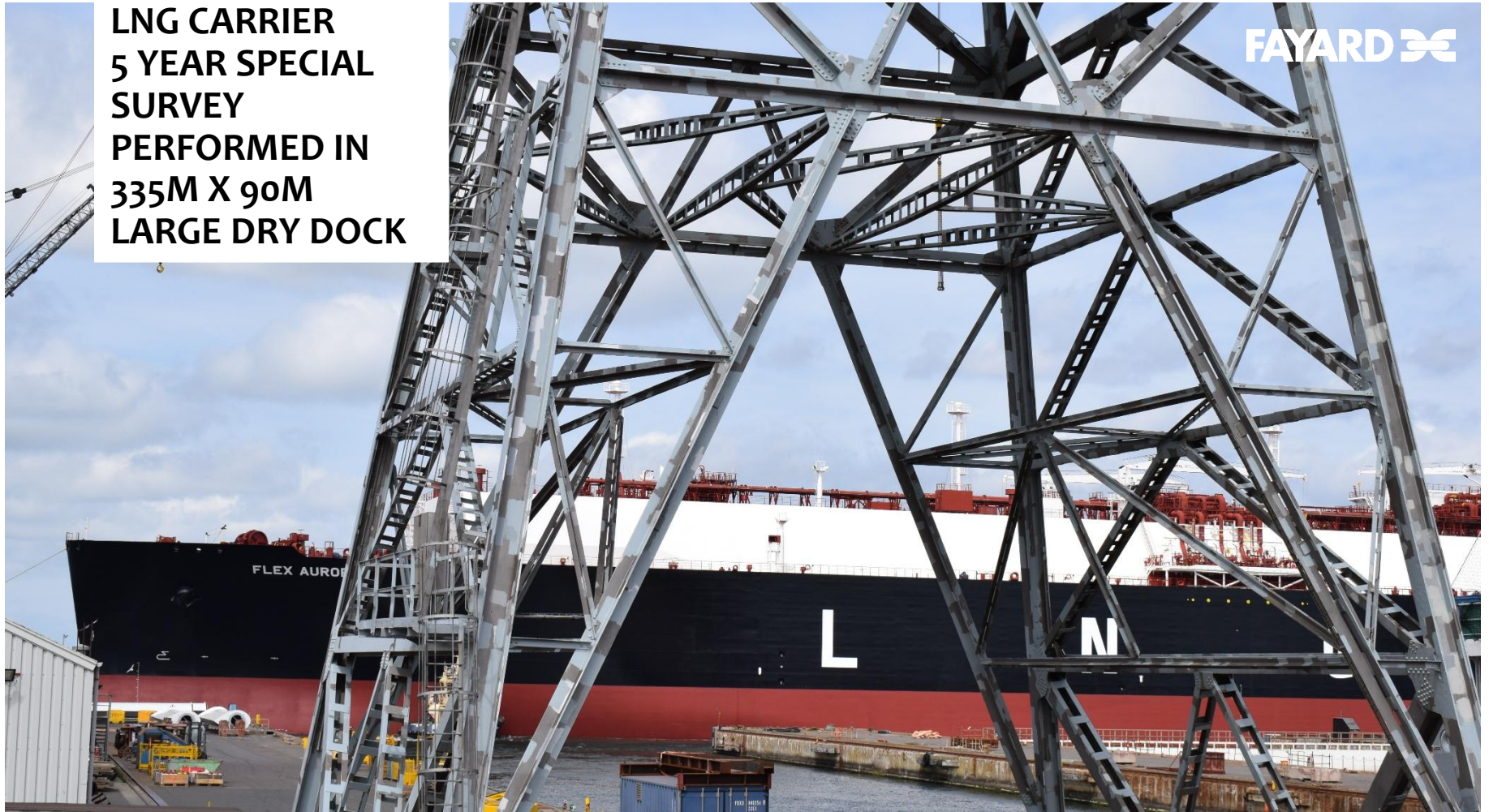
**FSRU 3RD SPECIAL
CLASS SURVEY AND
EXTENSIVE
TECHNICAL UPGRADE
PROGRAM,
INCLUDING CAP
SURVEY**

FAYARD 



Photo by Excelerate Energy Inc.

**LNG CARRIER
5 YEAR SPECIAL
SURVEY
PERFORMED IN
335M X 90M
LARGE DRY DOCK**



LNG CARRIER
IN FOR 5 YEAR
SPECIAL SURVEY
DRY DOCK:
335M X 90M



LNG GAS PROCESSING VESSEL- MODIFICATION PROJECT FOR NEW PORT LOCATION



PREPARING THE "NEPTUNE" FOR
HOEGH LNG TO "DEUTSCHE REGAS"
FOR THE "ENERGIE-TERMINAL" IN
MUKRAN(D).

**GAS PROCESSING
VESSEL
RETURNING TO
OPERATION
ON-TIME**



**10-YEAR SPECIAL SURVEY
CONDUCTED AT FAYARD
INCL. OVERHAUL OF THE
FEED GAS PUMPS**

MODIFICATION PROJECT OF LNG-VESSEL TO NEW ASSIGNMENT



PREPARING THE NEW FORREST
ENERGY'S LNG-TANKER
"NFE PENGUIN" FOR MOORED
LNG STORAGE & LNG TRANSFER
OPERATION IN THE GULF OF MEXICO.

MODIFICATION PROJECT OF LNG-VESSEL TO NEW ASSIGNMENT



AT FAYARD WE HAVE TWO
DRY DOCK OPTIONS RELEVANT FOR
- THE LARGER LNG CARRIERS &
- THE FSRU VESSELS

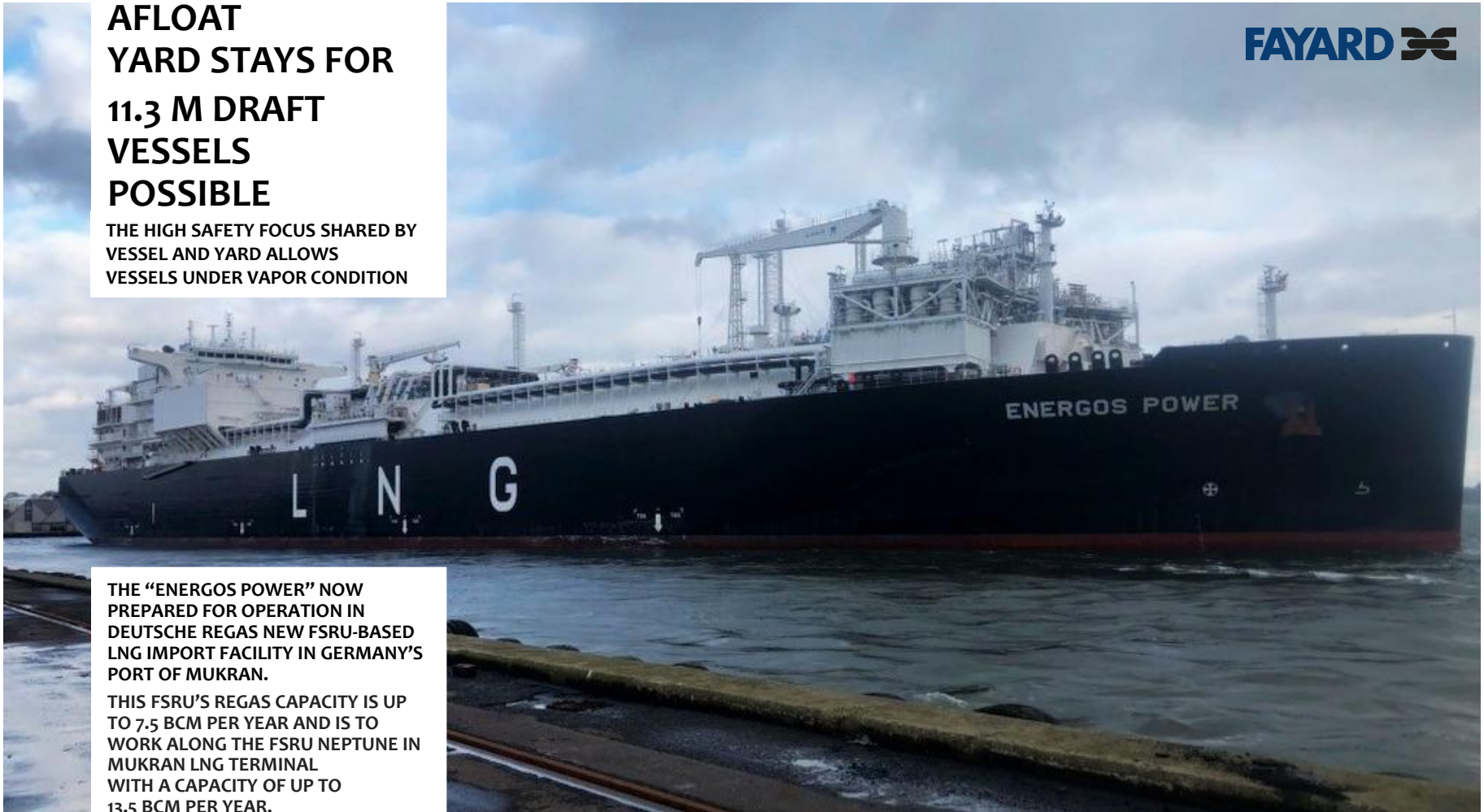
SERVICING & RETROFITTING LNG VESSELS & FSRU VESSELS ALONGSIDE

PREPARING THE ENERGOS' LNG/FSRU
"GOLAR IGLOO" FOR THE
EEMSHAVEN LNG IMPORT TERMINAL.
GOLAR IGLOO IS CONTRACTED BY
GASUNIE, AND IS TO PROVIDE
FLOATING REGASIFICATION CAPACITY
OF LIQUID NATURAL GAS INTO
GASEOUS NATURAL GAS FED INTO
THE DUTCH NATURAL GAS NETWORK.



AFLOAT YARD STAYS FOR 11.3 M DRAFT VESSELS POSSIBLE

THE HIGH SAFETY FOCUS SHARED BY
VESSEL AND YARD ALLOWS
VESSELS UNDER VAPOR CONDITION



THE “ENERGOS POWER” NOW
PREPARED FOR OPERATION IN
DEUTSCHE REGAS NEW FSRU-BASED
LNG IMPORT FACILITY IN GERMANY’S
PORT OF MUKRAN.

THIS FSRU’S REGAS CAPACITY IS UP
TO 7.5 BCM PER YEAR AND IS TO
WORK ALONG THE FSRU NEPTUNE IN
MUKRAN LNG TERMINAL
WITH A CAPACITY OF UP TO
13.5 BCM PER YEAR.

**SERVICING &
RETROFITTING OF
LNG-VESSELS,
DRY DOCKED,
AFLOAT OR
ALONGSIDE.**

**THE HIGH SAFETY
FOCUS SHARED BY
VESSEL AND YARD
ALLOWS VESSELS
IN UNDER VAPOR
CONDITION**



**STEEL RENEWAL
ON LNG-VESSEL
ALONGSIDE
IN UNDER VAPOR
CONDITION
POSSIBLE**

**THE HIGH SAFETY
FOCUS SHARED BY
VESSEL AND YARD
ALLOWS VESSELS
IN UNDER VAPOR
CONDITION**



**AFLOAT YARD
STAY FOR SERVICE
JOB IN UNDER
VAPOR CONDITION**

ARCTIC LADY

**FAYARD OFFERS ALONGSIDE
OPTIONS CLOSE TO OUR
SERVICE PORTFOLIO AND
WORKSHOPS**



**SAFE ANCHORING
AREA CLOSE TO
- MAJOR SHIPPING
LANE,
- FAYARD SERVICE
TEAM AND
- FAYARD
WORKSHOPS**



FAYARD RETROFIT
TEAM ON-SITE
YOUR LOCATION
ALSO AN OPTION



LNG BUNKER
VESSELS FOR
SHIP TO SHIP LNG
TRANSFER
SERVICED AT
FAYARD

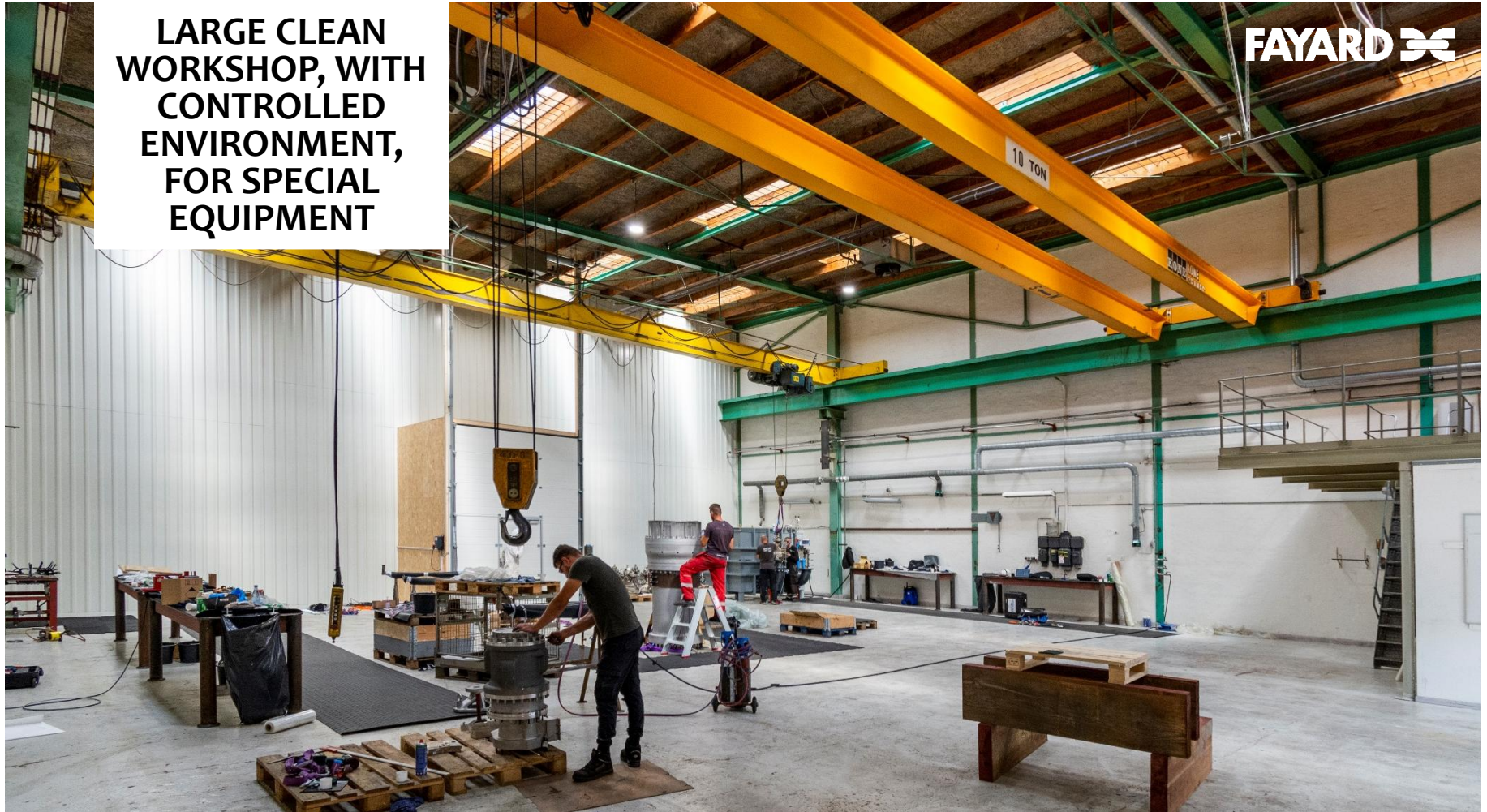


**DRY DOCKS FROM
145M X 30M, TO
335M X 90M
ALL DRY DOCKS
ARE GRAVED DRY
DOCKS**



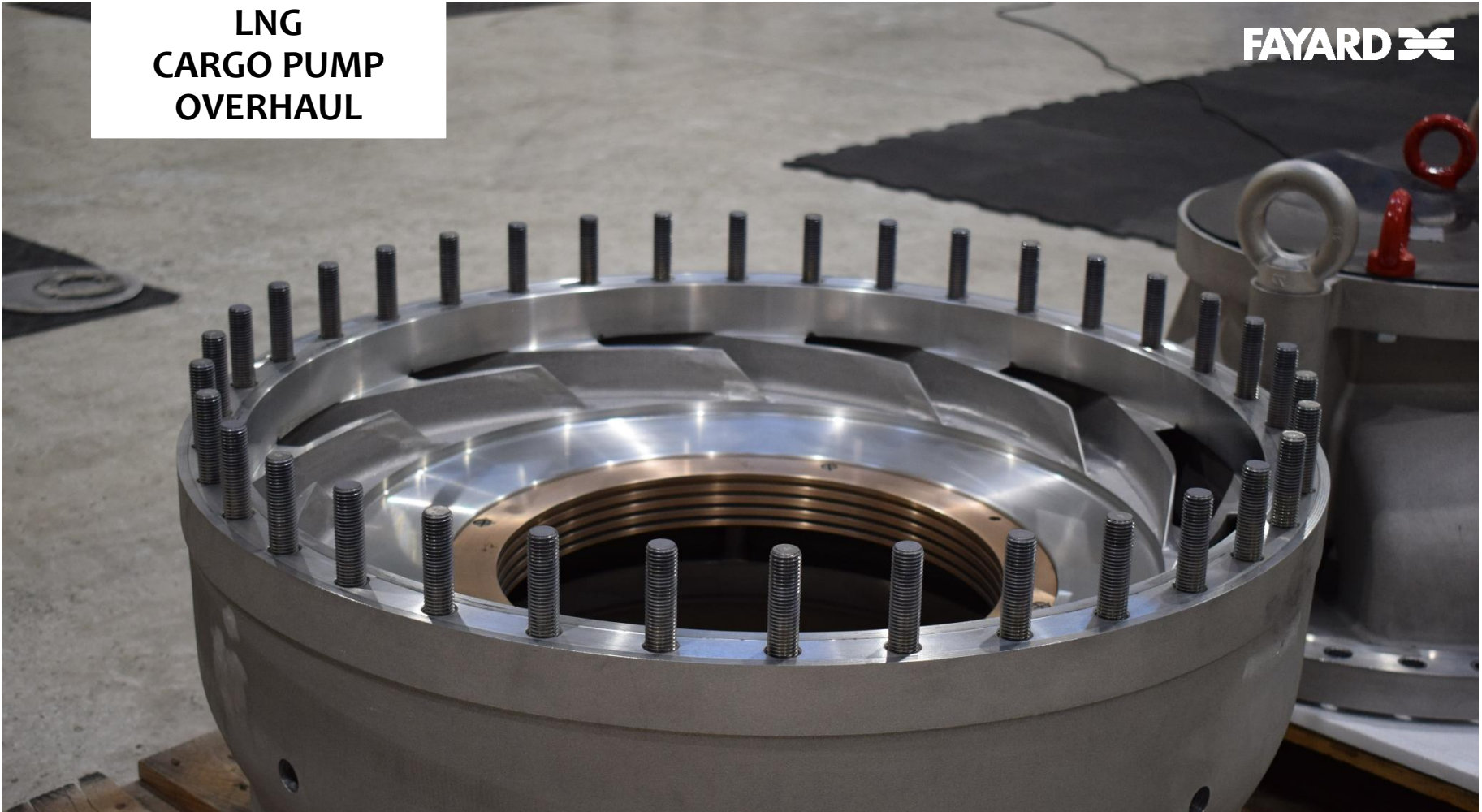
**LARGE CLEAN
WORKSHOP, WITH
CONTROLLED
ENVIRONMENT,
FOR SPECIAL
EQUIPMENT**

FAYARD 



**LNG
CARGO PUMP
OVERHAUL**

FAYARD 



**LNG
SAFETY VALVES
OVERHAUL
AND TESTING**

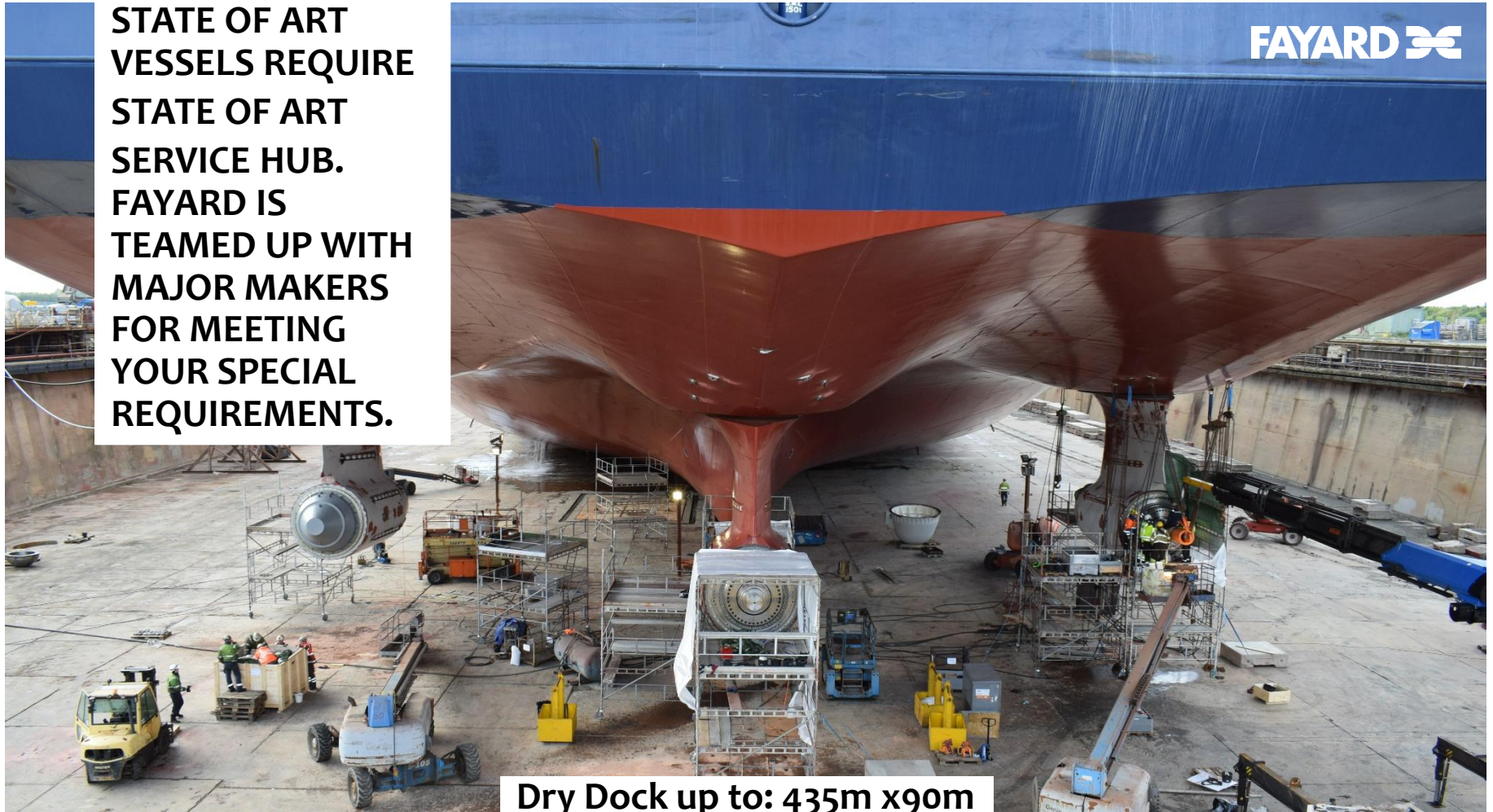
FAYARD 



LNG SAFETY VALVES OVERHAUL AND TESTING



**STATE OF ART
VESSELS REQUIRE
STATE OF ART
SERVICE HUB.
FAYARD IS
TEAMED UP WITH
MAJOR MAKERS
FOR MEETING
YOUR SPECIAL
REQUIREMENTS.**



Dry Dock up to: 435m x90m

**SAFE PREPARING
OF LNG TANKERS
SECURING
GAS FREE TANKS
FOR THE DRY
DOCK SCOPE OF
WORKS**



CONTROL OF CARGO TANK ENVIRONMENT DURING THE YARD STAY

The logo for Gasum, consisting of the word "Gasum" in a blue, sans-serif font with a stylized white gas flame icon integrated into the letter 'm'.

Gasum

For the LNG carriers as well as the smaller gas carriers we mobilize the right equipment to secure your vessel is in the correct condition during the yard stay



**ALTERNATIVE FUEL
BUNKER
AVAILABILITY AT
FAYARD:
TRUCK TO SHIP,
e.g., after
LNG Tank Services**



**ALTERNATIVE FUEL
BUNKER
AVAILABILITY AT
FAYARD:
SHIP TO SHIP (STS)**

FAYARD 

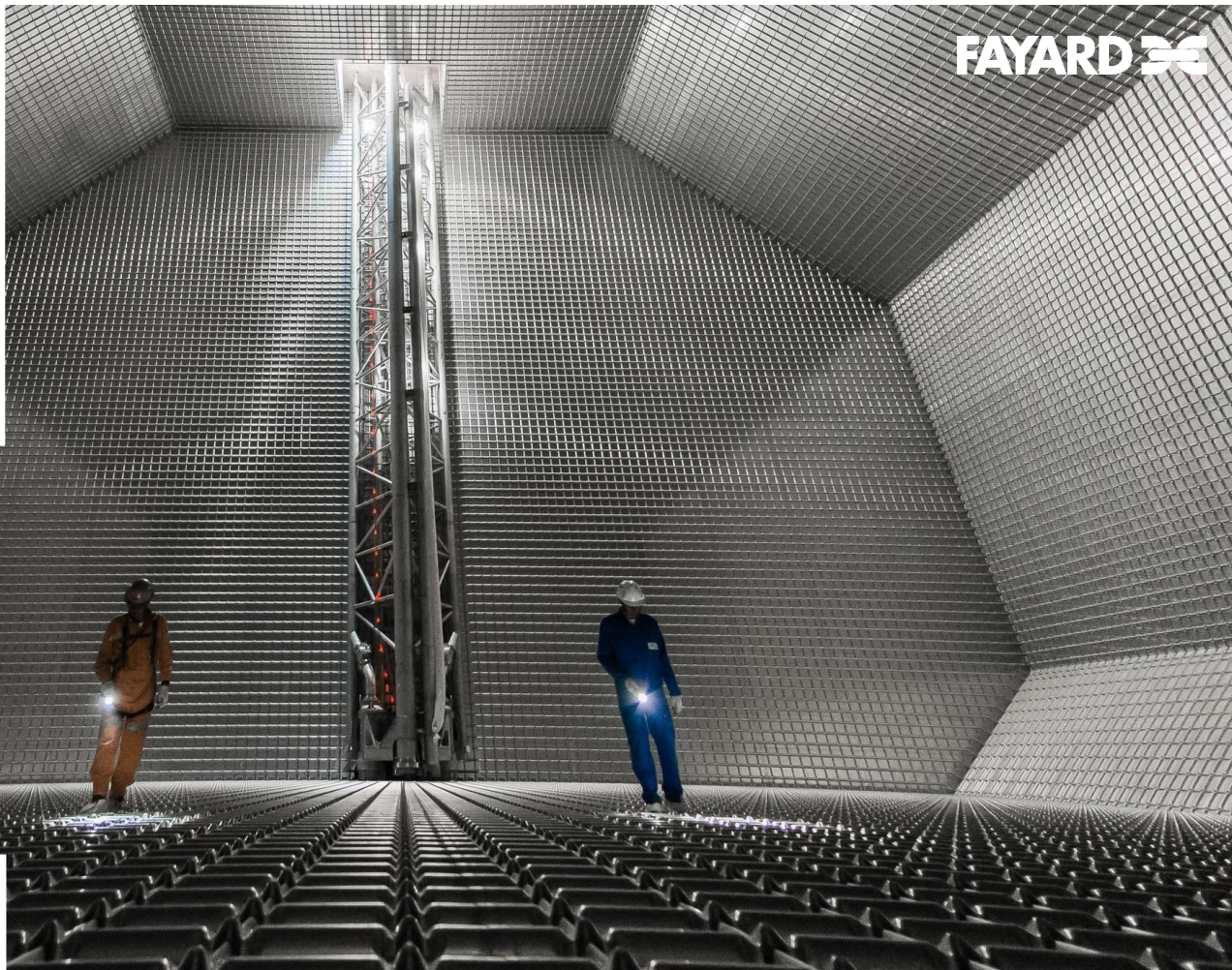


GTT MEMBRANE LNG VESSELS

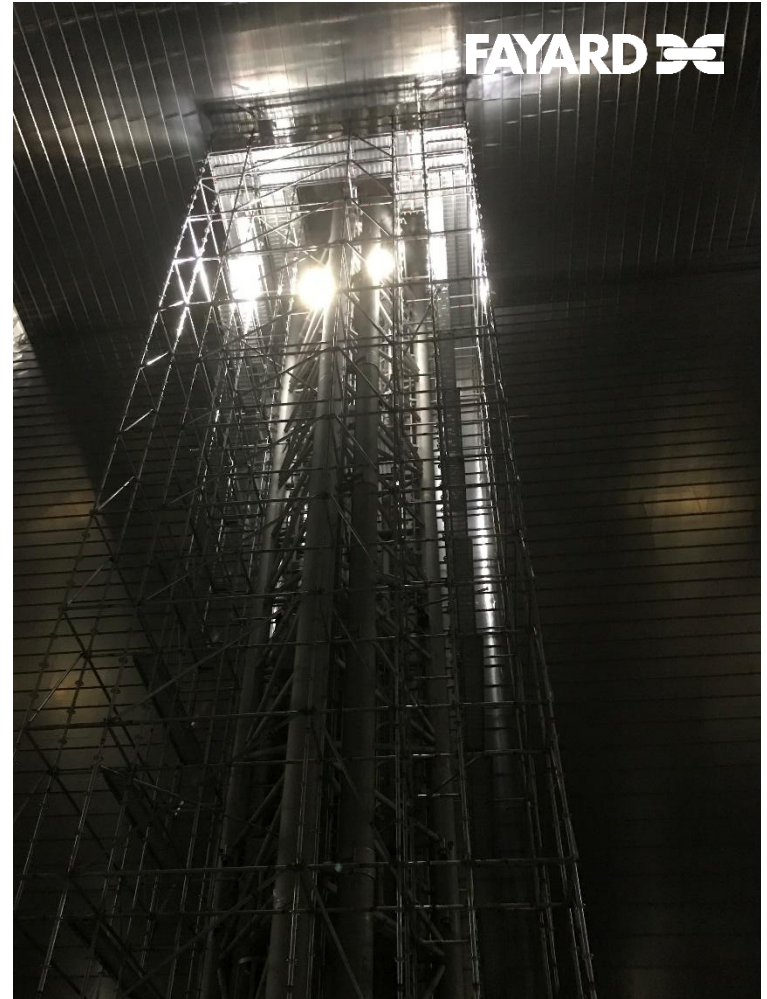
FAYARD HAS
TECHNICAL SERVICE
AGREEMENT FOR
MAINTENANCE AND
REPAIR OF MEMBRANE
LNG CARRIERS WITH
GAZTRANSPORT &
TECHNIGAZ SA (GTT)

FAYARD 


Expert in LNG



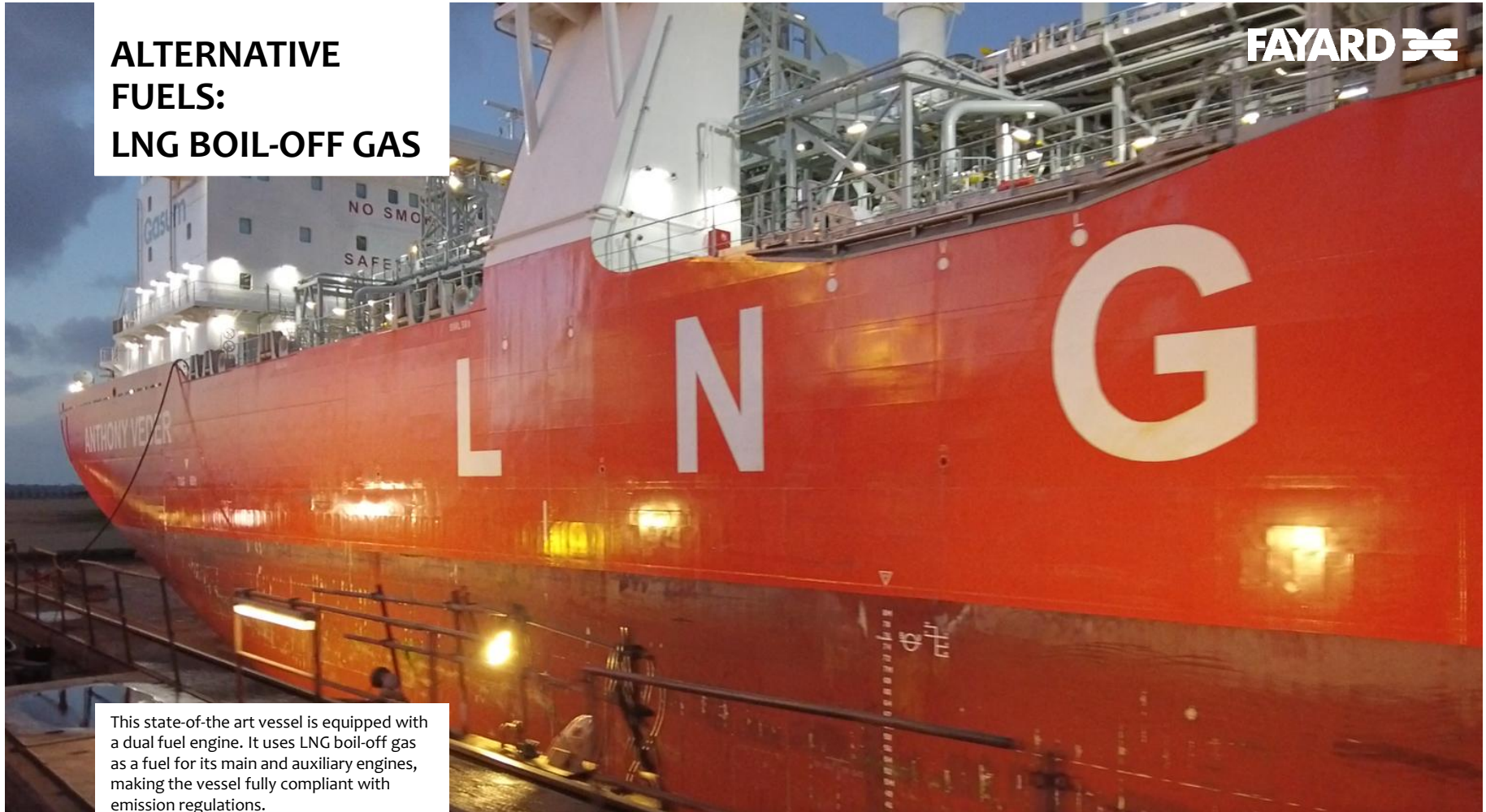
- CLEAN
SCAFFOLDING FOR
LNG MEMBRANE
TANKS
- CRYOGENIC
WORKSHOP



CLASS SURVEY OF COMBINATION GAS TANKERS (LNG/LPG)



ALTERNATIVE FUELS: LNG BOIL-OFF GAS



This state-of-the-art vessel is equipped with a dual fuel engine. It uses LNG boil-off gas as a fuel for its main and auxiliary engines, making the vessel fully compliant with emission regulations.

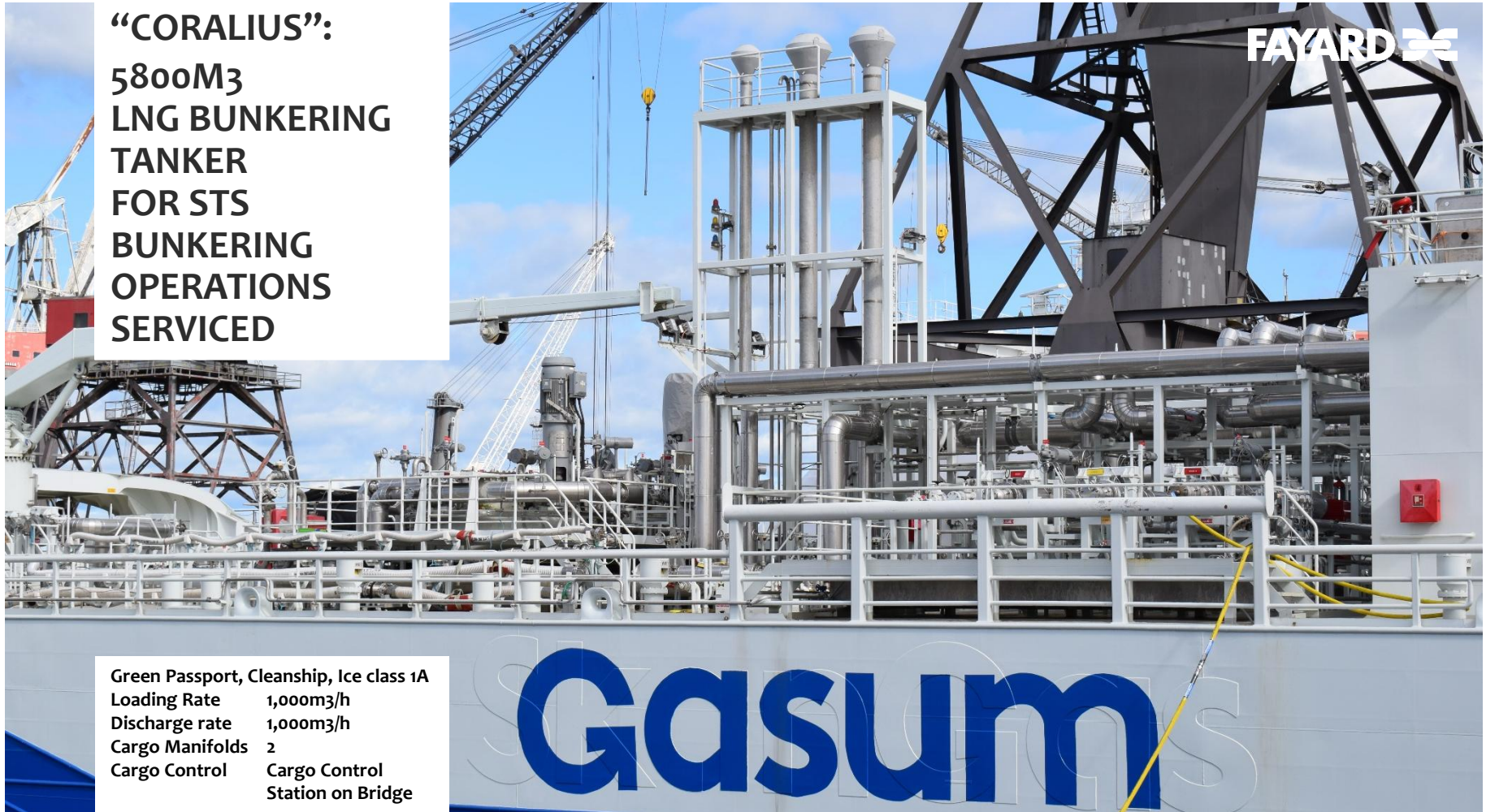
**COMBINATION
GAS TANKERS
(LNG/LPG)
SERVICED
PROPELLANT:
ETAN**



Worlds First Etan (LEG) propelled vessel series that not only transports LNG, LPG and LEG but also can sail on the mentioned.

“CORALIUS”:

**5800M3
LNG BUNKERING
TANKER
FOR STS
BUNKERING
OPERATIONS
SERVICED**



Green Passport, Cleanship, Ice class 1A
Loading Rate 1,000m3/h
Discharge rate 1,000m3/h
Cargo Manifolds 2
Cargo Control Cargo Control Station on Bridge

Gasum

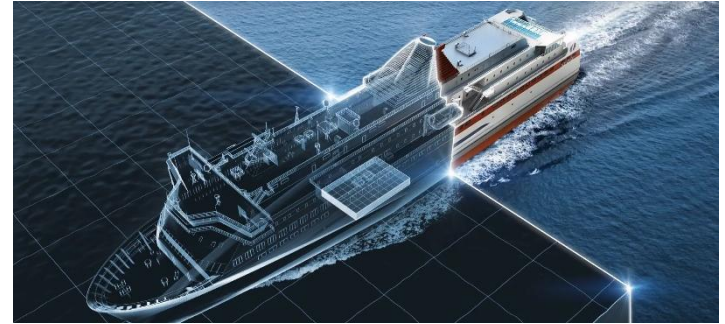
LNG, a marine fuel for all segments

With the *Global Sulphur Cap 2020*, the latest regulation adopted by the International Maritime Organization (IMO), merchant vessels' owners must comply with new Sulphur oxide emissions of not more than 0.5% worldwide since January 1st 2020, against 3.5% previously.

Compared to Heavy Fuel Oil (HFO), the use of LNG allows substantial reductions of more than 99% of Sulphur emissions, 80% for nitrogen oxides, most particulate matters, and also up to 20% for carbon dioxide.

LNG is thus considered as green fossil energy, and a real technological breakthrough to reach compliance and maintain competitiveness at the same time.

- LNG as fuel is available for all shipping segments, such as container ships, tankers, bulkers, car carriers, cruise vessels, etc.
- Membrane tank volumes can vary from 1,000 m³ for passenger ships, to 10,000 m³ for tankers, and close to 20 000 m³ for very large container vessels.
- The increasing demand for LNG as a fuel goes hand in hand with a developing supply and service chain.
- GTT provides on-site technical support for inspection, maintenance and repair of its tanks thanks to a **worldwide network of approved repair yards**, trained and qualified by GTT.



DUAL FUELED LNG
TRAILING SUCTION
HOPPER DREDGER
SERVICED



**DUAL FUEL
LNG/MGO
PROPULSION
SERVICED**

**TT-LINE'S GREEN SHIPS:
5 STARS SCORE IN THE
CLEAN SHIPPING INDEX
98% LESS SOX
82% LESS NOX
93% LESS PARTICLES
22% LESS CO₂
WHEN ON LNG VS. MGO**



**100% BIOFUEL
COMPATIBLE,
ELECTRIC POWER
SUPPLY HYBRID
SYSTEM**



**ESS, ONSHORE POWER
SUPPLY AND DC-LINK
SYSTEM.
ZERO EMISSIONS DURING
PORT OPERATIONS**

**ALTERNATIVE
FUELS:
LNG – LBG
SERVICED**



**First 5-Years Dry Docking,
The vessel kept the LNG in the
tanks during the docking.
Duration of yard stay: 8 days**

ALTERNATIVE FUELS: RENEWABLE LIQUEFIED BIOGAS (LBG)



As a fuel, renewable LBG is interchangeable with LNG. LNG and LBG is one of the concrete actions that will take us towards a low-carbon society of the future. Terntank's LNG propelled vessels are able to operate on 100% biofuels

**ALTERNATIVE
FUEL:
CONVERSION TO
DUAL FUEL
LNG/MGO
OPERATION**



FURETANK'S LNG CONVERSION OF
FURE WEST AT FAYARD A/S.

FURE WEST HAS BEEN CERTIFIED AS
"GREEN VESSEL" ACCORDING TO THE CSI
AND WILL REDUCE CO₂, ELIMINATE SOX
AND PM AND MINIMIZE NOX".

Making Global Goals Local Business



We are fully committed to conducting our activities in an environmentally responsible manner. In our attempt to run a yard that is as environmentally friendly as possible we have amongst others Implemented:

- All Dry Docks are environmentally Closed Loop systems
- Hull Cleaning preferable by Water Jetting
- Shore Power availability for reducing of vessel emissions
- Tank Washing Water Receive System (Slop)
- Vessels in Inerted condition allowed reduces emissions
- Lower VOC Emission to air than allowed quota
- Waste Management System in operation
- All Chemicals are stores in Secured areas
- Recycling of scrap materials to high extend
- LED-bulbs used where applicable for energy savings
- EU-approved Ship-recycling facilities in Dry Dock up to 415mx90m



FACILITIES

Our easily accessible and efficiently organized area includes 4 dry docks, 6 cranes, 3 construction & assembly halls, modern disposal facilities and on-site workshops.

DRY DOCKS

Dock 1 303 x 45 x 7

Dock 2 280 x 44 x 7

Dock 3 335/415 x 90 x 8

Dock 4 145 x 30 x 8

dock-pit 6.2 x 6.2 x 2.4 m

dock-pit 14.0 x 6.0 x 3.5 m
9.0 x 6.0 x 3.5 m

dock-pit 6.2 x 6.2 x 2.4 m

CRANES

Capacity up to 1,200 tonnes

REPAIR BERTHS

Max. draught 7m - 11 m

CONSTRUCTION & ASSEMBLY HALLS

32,000 m²

TANK WASHING WATER DISPOSAL FACILITIES

Up to 600 m³

ELECTRICAL SHORE POWER (at each dock)

1000 A - 440 V - 60 Hz 1200 A - 400 V - 50 Hz

TOTAL AREA

165,000 m²

MODERN DRY DOCKS

In 2011, we invested in 3 modern dock gates and an upgrade of the pumping systems for the docks with dock-pits to increase the docking efficiency.

Due to these upgrades, we can start working on your vessel only 3-4 hours after your arrival.

The dock gates in 3 of our docks open or close in just 4 minutes.

BERTH AND OTHER FACILITIES

For offshore platforms and semi-subs, we have the required berth facilities.

Jacking-up is possible.

Berths are used for the type of work that does not specifically requires dry docking.

ENVIRONMENT

We are fully committed to conducting our activities in an environmentally responsible manner.

In our attempt to run our yard as environmentally friendly as possible we have invested in - two state-of-the-art waste-water treatment facilities with connections in the dock, for e.g. tank washing water. One set of tanks is connected to 3 of our docks and the other is connected to the large Dock 3. UHP water jetting capacity for fast hull process in all docks

MANAGEMENT SYSTEM

Certified to the ISO 9001, 14001 & 45001 standards by Bureau Veritas

CERTIFIED MANAGEMENT SYSTEM

FAYARD 

Bureau Veritas Certification

Fayard A/S
Kystvejen 100, 5330 Munkbo, Denmark

Bureau Veritas Certification Holding SAS - UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001:2015
Scope of certification

Docking and repair of ships and floating units.

Original cycle start date: 08-03-2012
Expiry date of previous cycle: NA
Certification / Recertification Audit date: 06-02-2024
Certification / Recertification cycle start date: 08-03-2024
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: 07-03-2027

Certificate No.: DK016992 Version: 1 Issue date: 13-02-2024


Signed on behalf of BVCH SAS UK Branch
Certification Body Address: 5th Floor, 66 Prescott Street, London, E1 6HG, United Kingdom
Local Office: Bureau Veritas Certification Denmark A/S, Oksbølvejsgade 25-31, 7000 Fredericia

Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: +45 77 21 8000
UKAS Certificate Template Single Site Rev. 4.1 28 Aug 2023



9001:2015

Bureau Veritas Certification

Fayard A/S
Kystvejen 100, 5330 Munkbo, Denmark

Bureau Veritas Certification Holding SAS - UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 14001:2015
Scope of certification

Docking and repair of ships and floating units.

Original cycle start date: 01-05-2017
Expiry date of previous cycle: NA
Certification / Recertification Audit date: NA
Certification / Recertification cycle start date: 01-05-2023
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: 30-04-2026

Certificate No.: DK016696 Rev: 1 Issue date: 19-04-2023


Certification Body Address: 5th Floor, 66 Prescott Street, London, E1 6HG, United Kingdom
Local Office: Bureau Veritas Certification Denmark A/S, Oksbølvejsgade 25-31, 7000 Fredericia

Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: +45 77 21 8000



14001:2015

Bureau Veritas Certification

Fayard A/S
P-no. 1001710770, Kystvejen 100, 5330 Munkbo, Denmark

Bureau Veritas Certification Denmark A/S certifies that the Management System of the above organization has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standard
ISO 45001:2018
Executive Order No. 1409 / 2020
Scope of certification

Docking and repair of ships and floating units.

Original Cycle Start Date: 13-06-2023
Expiry date of previous cycle: NA
Certification/Recertification Audit date: NA
Certification/Recertification cycle start date: 13-06-2023
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: 12-06-2026

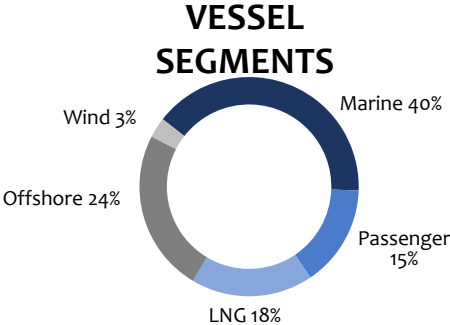
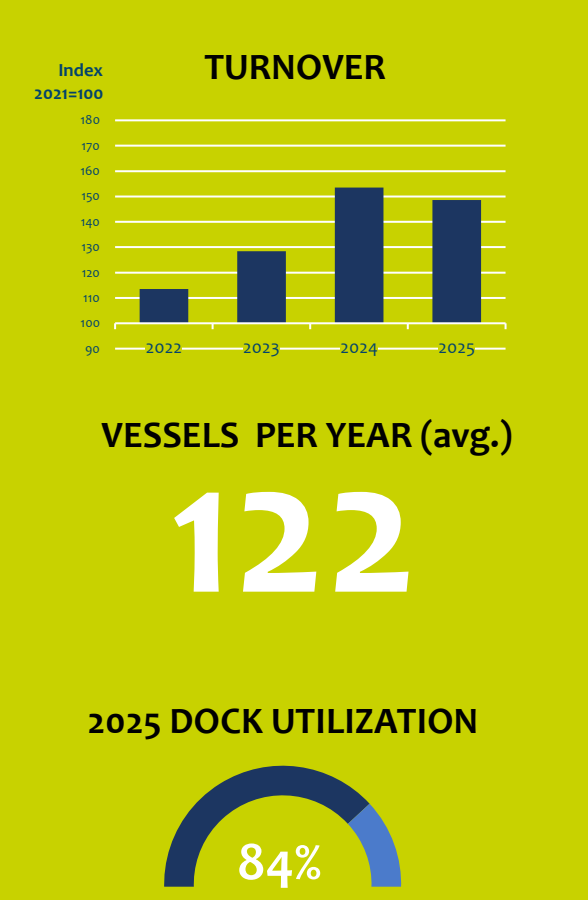
Certificate No.: DK016932 Version: 1 Issue Date: 13-06-2023


Certification Office: Bureau Veritas Certification Denmark A/S Oksbølvejsgade 25-31, 7000 Fredericia, Denmark
Further clarifications regarding the scope of this certificate and the applicability of the Management System requirements may be obtained by contacting the organization. For more, this certificate validity please call: +45 77 21 8000

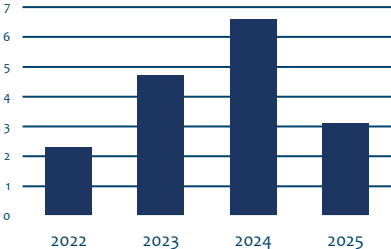
 

45001:2018

THE NUMBERS



OSHA TRIR
(the 200,000 hrs benchmark)



DELIVERED ON-TIME

100%

AVERAGE WORKING HOURS PER YEAR



PART OF TURNOVER FROM RETURNING CUSTOMERS

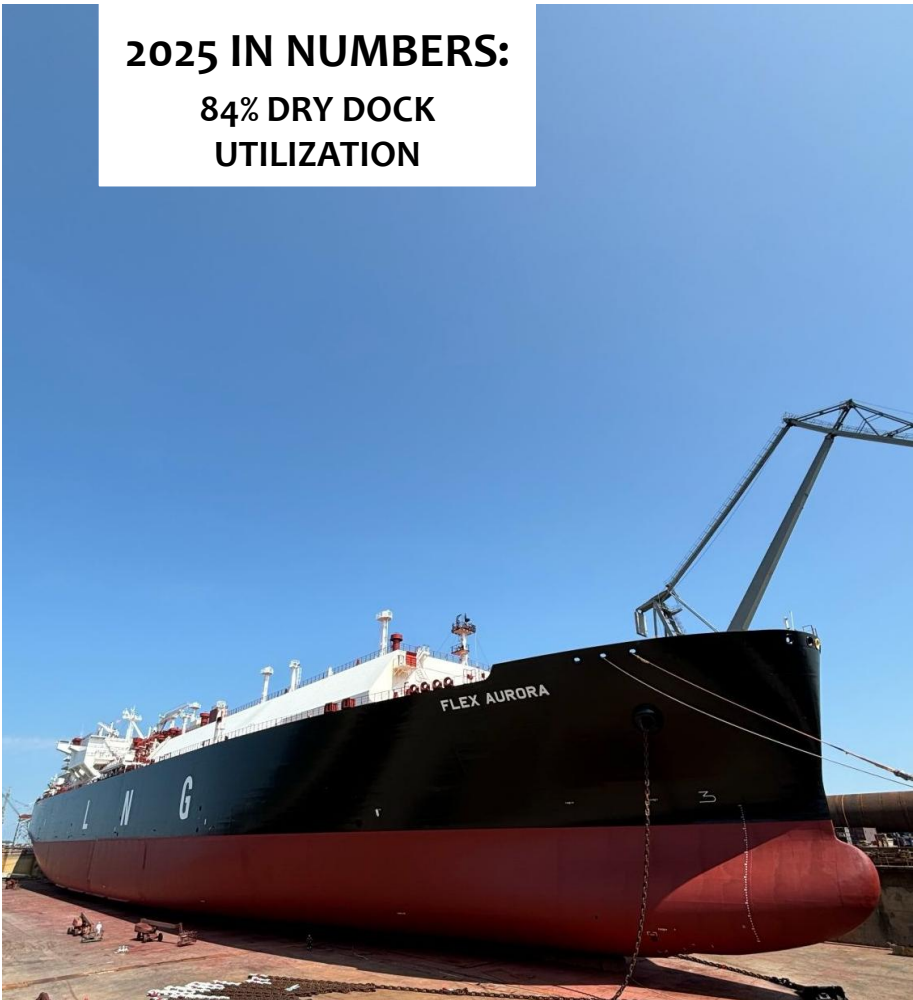
94%

DOCK AVAILABILITY
Meets requested service slot

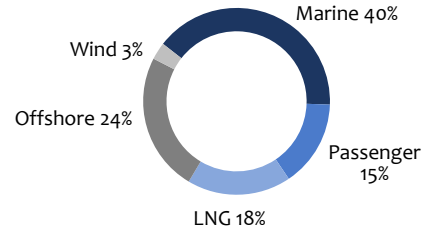
96%

2025 IN NUMBERS:

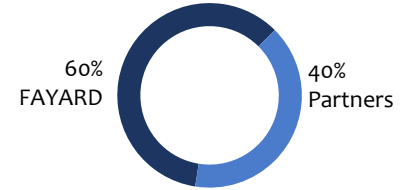
84% DRY DOCK UTILIZATION



Segments



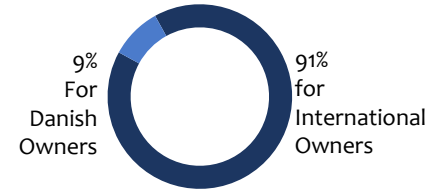
Project Controlling Network Organization



Customer Appreciation



International activities



110 years of being On-Time

Quality - On time - Always



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