

Yardtech proudly presents DAMEN Shiprepair Brest, DSBr

DSBr Strengths

- Centrally located at the entrance of the English Channel, directly facing the North Atlantic Ocean
- Large yard size with storage capacities and the ability to handle projects with a large logistical demand (such as cruise projects)
- One of the largest drydocks in Northwest Europe (420 x 80m)
- Adjacent port terminal facilities for (un)loading and temporary storage of containers
- A reliable subcontractor and supplier network
- LNG tanker expertise (plus a GTT license)

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Contact Damen Shiprepair Brest and Yardtech Marine Services S.A.

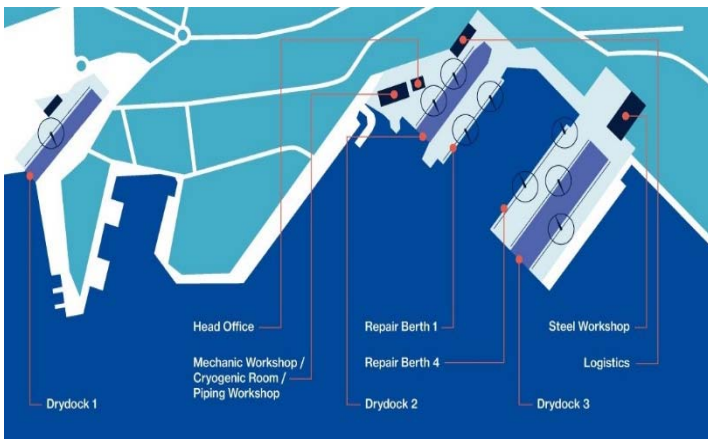
About Damen Shiprepair Brest

History

In 1963, the Brest yard expanded its facilities with the construction of a second dock. 1968 saw the yard expand its capabilities even further, paving the way for Brest to become the top French maritime repair centre. DSBBr builds on this heritage by continually developing existing skills, technical expertise, and by maintaining its high-quality facilities.

Several hundred vessels have been serviced at DSBBr over the past 25 years, ranging from crude oil tankers, product tankers and shuttle tankers, to ferries, oil rigs, bulk carriers and container vessels.

DSBBr has performed lifecycle maintenance and repair work on more than 100 LNG tankers. The experience gained from this work has become an invaluable asset to its clients. A long-term collaboration with the local Chambre de Commerce et d'Industrie ensures the continuation of ship repair and conversion activities by DSBBr, fitting perfectly into the long-term strategy of the Damen Shipyards Group.



“With 3 dry docks, the largest being 420 x 80 m, DSBBr accommodates almost any ship in the world”

Facilities

Damen Shiprepair Brest is part of the large Damen Shiprepair & Conversion Group. This is a well-established repair yard with modern facilities.

With several repair quays and 3 drydocks, the yard can accommodate the world's largest vessels. The largest, at 420 x 80 metres and is one of the biggest in Europe. Large crane capacity is available, and up to 150

Additionally, there are two deep water repair quays with ample crane capacity and several workshops, dedicated to large-scale steelworks, mechanical and machining works, LNG equipment and pipefitting.

The yard also features de-slopping and polluting water discharge facilities and well-equipped offices for its clients.



Services for LNG Vessels

- The shiprepair yard offers a broad range of services for many LNG vessels. Its highly skilled workforce is particularly well known for its vast LNG tanker expertise.

	BERTH 1	BERTH 4	DOCK 1	DOCK 2	DOCK 3
Length o.a. (m)			225,0	338,0	420,0
Breadth (m)			27,0	53,0	80,0
Draft (m)	10,0	10,0	7,3	10,3	10,3
Number of cranes	3	4	1	4	4
Crane capacities (mt)	90	150	30	90	150

- Shore power up to 800A – 440V – 60HRZ. Fire main up to 8 bars. Compressed air up to 7 bars. Fresh water / potable up to 5 bars. Ballast line up to 2,500m³/h. Cooling water line in Drydock No.3 up to 800 m³/h. Generator sets up to 2100 KVA .
- Well-equipped machine workshops of 5,500 m², 50 machine tools, Gantry cranes up to 60t, balancing machine, etc



- A 8,000 m², steel workshop
 - Gantry cranes up to 40t
 - Module prefabrication up to 150t
 - Cutting benches, roller-presses
 - Welding machines, MIG, TIG, etc
- Piping prefabrication capacity up to 1,200mm diameter.
 - Certified Welders & NDT operators
 - Hydraulic pickling and flushing plant
 - High pressure testing of piping systems
 - Boiler works
 - Own piping technicians to provide customers advanced of prefabrication drawings



DAMEN SHIPREPAIR BREST

- One of the biggest docks in Europe (420x80m), shore crane, tunnel access*
- Shipyard size and adjacent port terminal facilities*
- Specialized LNG services (GTT licence)*
- Deep water quay side possibilities*
- Employees: 172*
- ISO certificates: ISO 9001: 2015*

DSBr: The YAMAL Project

YAMAL Vessel Shore Cooling Supply

In addition to the electrical HV shore power supply, Damen proposes to improve the shore cooling connection.

Currently, the cooling connection must be done from the main deck to the main coolers down below the engine room with hoses. The other option is to use the fire main as a cooling line.

- ✓ Multiplying hoses increases the flooding risk of engine room
- ✓ The hoses obstruct stairways and fire doors
- ✓ Ship's fire fighting system is deteriorated : Normal set point at 7 bar, but cooling water is passing through at 3 bar while used as DG cooling

Damen proposes to use partially the SW line of the IG Scrubber to feed the DG Main Cooler

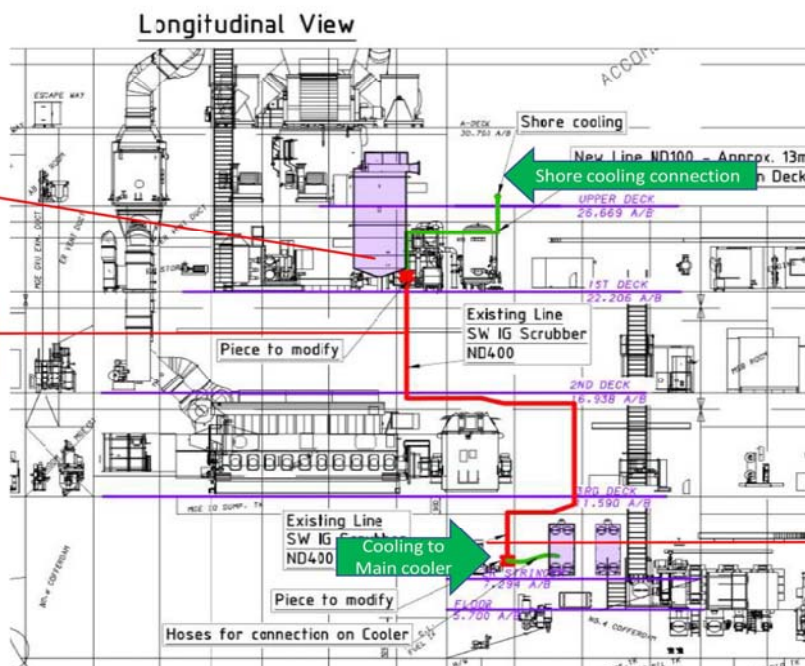
- ✓ Securing the installation of the shore cooling connection
- ✓ Increase of SW flow going to the Main cooler
- ✓ Permanent modification suitable for all dry docking



Pipe schematic from IG Scrubber to DG Main COOLER



IG Scrubber SW line ND 400 (existing pipe)





Shore SW cooling arrangement principle

In principle, the main idea is to use partially the existing the IG Scrubber SW line. The line goes from the main SW cross over to the ER 1st floor (3 floors above).

- ER (bottom Cross Over) > 3rd floor > 2nd floor > 1st floor (IG Scrubber)

The shore cooling can be connected to the IG scrubber SW inlet. Only one spool piece (already existing) need to be modified with one branch DN100.

At main cooler level, one spool piece (already existing) need also to be modified with one branch DN100. Then the main cooler can be connected easily with a short hose.

For the connection from the main deck to the IG scrubber.

There are 2 options:

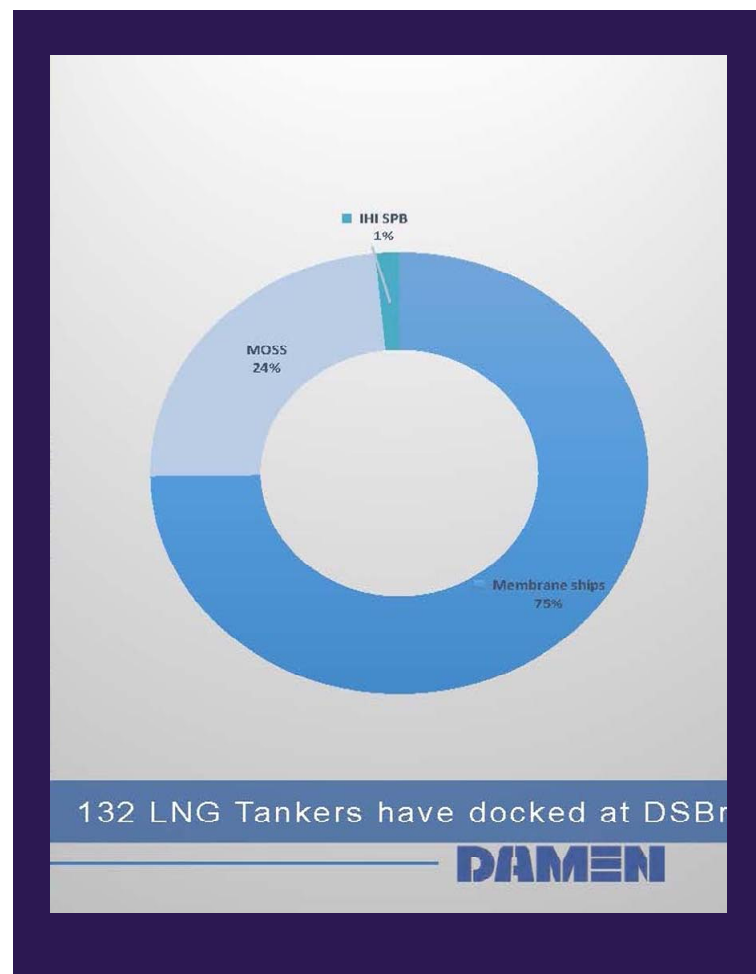


1. Hoses
2. New line with would be the best option

“(...) The high commitment of the Damen teams, combined with that of all the crew members, the Gazocean vessel manager, and the procurement team, confirmed that this choice was the good option.”



Gaselys | Nicolas Barnaud, President of NYK Armateur



DSBr: The YAMAL Project

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Connection on IG Scrubber SW inlet pipe

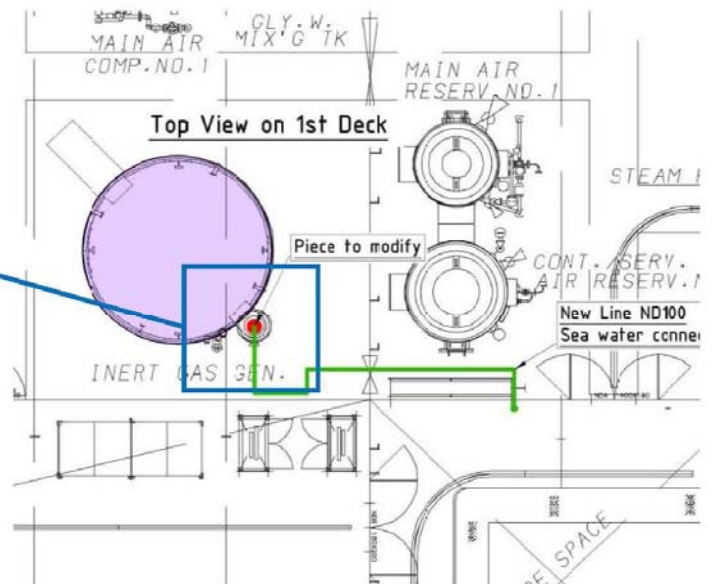
- Existing spool piece to be replaced by a New spool with a branch connection (with ND100 connection) and isolating valves

View on 1st Deck at 22.206 A/B



Existing spool piece to be replaced by a New spool with a branch connection (with ND100 connection) and isolating valves

Sea Water Line for Scrubber ND400



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Connection between IG Scrubber SW pipe and the Main Cooler

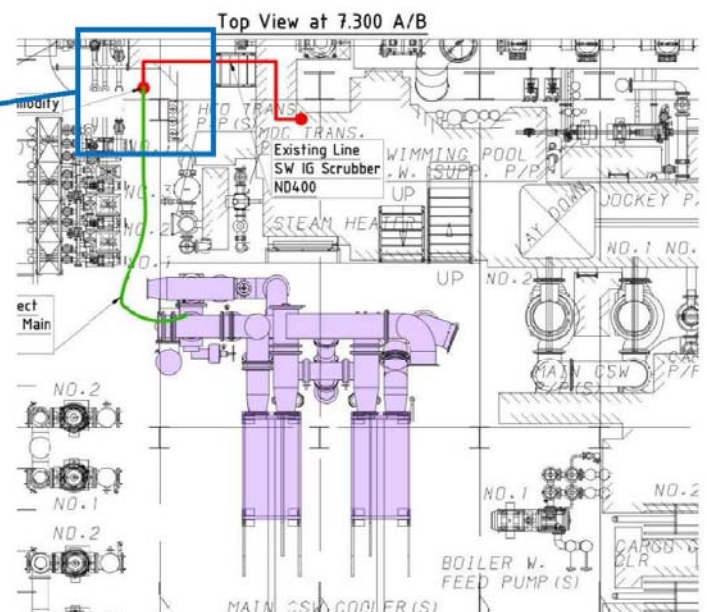
- Existing spool piece to be replaced by a New spool with a branch connection (with ND100 connection) and isolating valves
- Connection between new spool piece and main cooler with hose ND100

View on Floor at 7.300 A/B

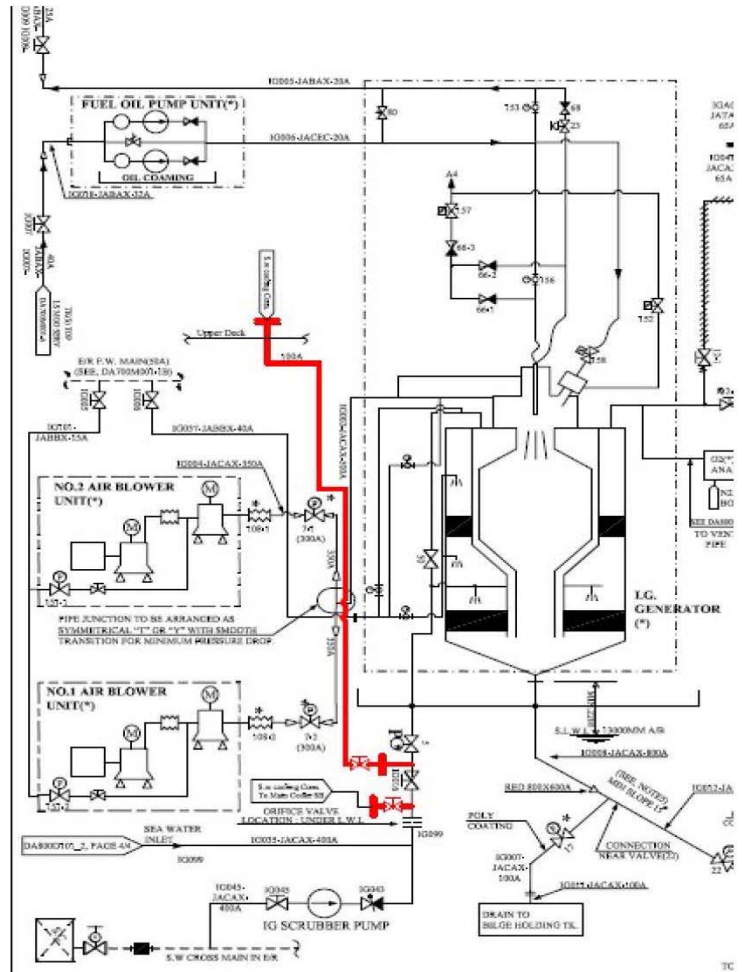


Sea Water Line for Scrubber ND400

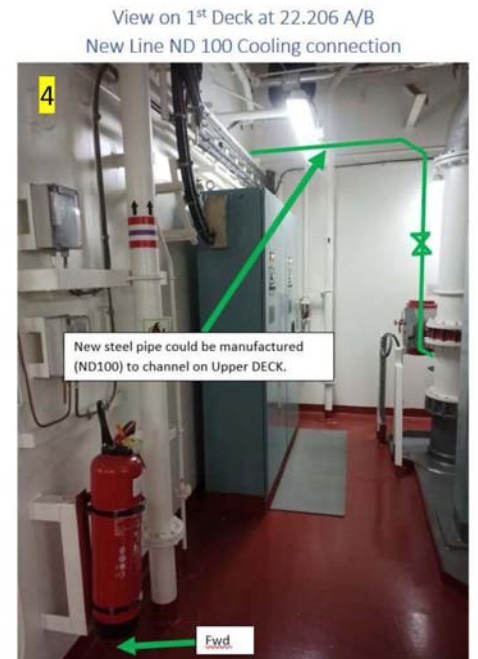
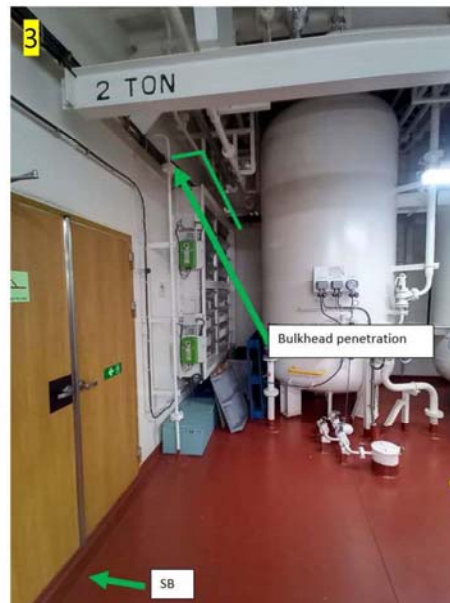
Existing spool piece to be replaced by a New spool with a branch connection (with ND100 connection) and isolating valves



PI&D of Shore cooling connection and the IG Scrubber line



Proposal for the routing of Shore cooling SW pipe from the main deck to the IG scrubber

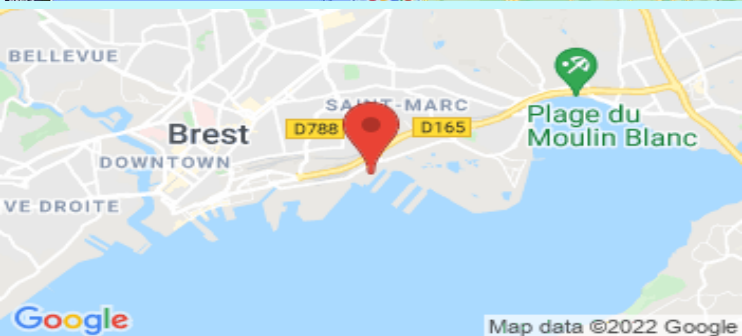


View on 1st Deck at 22.206 A/B
New Line ND 100 Cooling connection

New steel pipe could be manufactured (ND100) to channel on Upper DECK.

DAMEN SHIPREPAIR BREST

More than 30 years of experience in repairing LNG Vessels



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