

Yardtech's News

VOLUME 5 ISSUE 2



How Green can you get?

At the end of this year, in our Company **YARDTECH MARINE SERVICES S.A.**, we feel the need to thank all our Clients who trusted us and agreed to complete interesting and difficult projects in **DAMEN SHIPYARDS**, worldwide at Amsterdam, Rotterdam, Brest, Dunkirk, Mangalia and Curacao.

We are grateful to both our Customers and our Principals **DAMEN GROUP** who performed skillfully and successfully to each Project with Special Attention, each time.

DAMEN SHIPYARDS opened their Drydocks to 30 Greek vessels of the Biggest Greek Shipowners, this year.

Tsakos Group, Martinos Group, Livanos Group, Angelicoussis Group, Economou Group, Konstantakopoulos Group and many more, were

experienced the best of **DAMEN** performance completing their Projects, always, in time.

However, nowadays, we must urgently point out the new CO2 Regulations of Europe and later of USA, P. Gulf and Far East. Emission-free sailing is now more important than ever for seagoing vessels and inland shipping. With the introduction of the **Carbon Intensity Indicator (CII)**, it is Damen's responsibility to not only help you comply with these regulations, but also to benefit from impressive savings of fuel consumption of more than 10%. Our air lubrication system for vessels can even achieve a fuel reduction of up to 15%. **DAMEN GREEN** is ready and prepared to offer you **THE SOLUTION** for reduction of Fuel Consumption through the **AIR CAVITY SYSTEM**.

KINGFISHER MARINE SERVICES Co., Ltd. expanded their activities in the Greek market supporting more and more companies on spare parts basis, new regulations on fuel saving device.

They are always ready to provide also dd repairs, inspections surveys, etc in the most reliable Chinese shipyards.

INDEX COOL GROUP OF COMPANIES is located in the most popular port of Far East, Singapore. Is equipped with a strong and expert team who supports "Round - the - Clock", repairs afloat, at anchorage, on - voyage and in the shipyard as a subcontractor.

Most of the Greek Customers with often calls of their fleet in Singapore, use this Group with successful results.

Enjoy Reading

Green Issue - Breaking News:

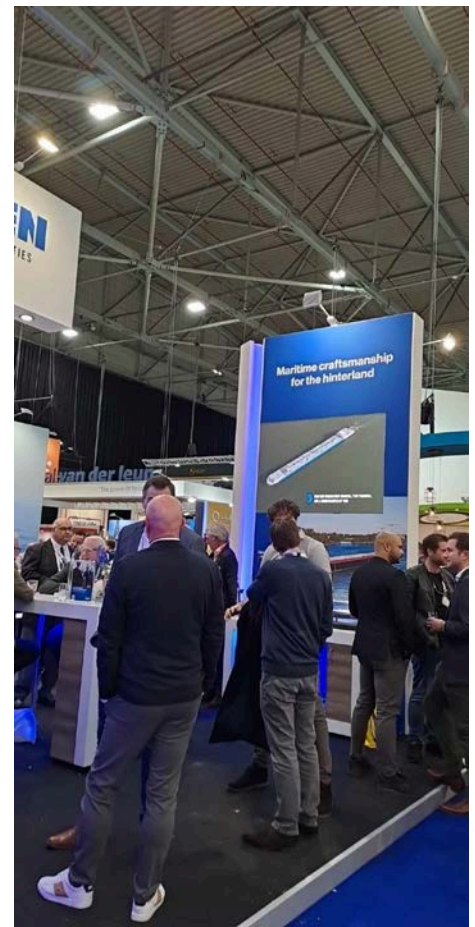
- DAMEN SHIPREPAIR & CONVERSION GROUP
- DAMEN AIR CAVITY SYSTEM (DACS)
- INDEX-COOL MARINE & INDUSTRY PTE. LTD
- KINGFISHER (SHANGHAI) MARINE SERVICES CO. LTD

30 years in the
Greek Shipping Market



www.yardtech.gr
yardtech@otenet.gr

DAMEN GROUP @ ROTTERDAM EUROPOORT exhibition: <https://www.europort.nl/>



DAMEN SHIPREPAIR & CONVERSION GROUP N.W.EUROPE / BLACK SEA (MANGALIA) / CURACAO

The Greek Customer who selected DAMEN AMSTERDAM SHIPYARD for their Projects were the following:

- MCT INC booked MV APOLLO Z, MV THESEUS Z and MV HAVILLA NEPTUNE (Jan-July 2023)
- ASSO DIVERS booked MV ATALANTI and MV ARTEMIS.

DAMEN BREST SHIPYARD came as a first priority for the Projects of the following Customers:

- MARAN GAS awarded the dd repairs of LNG MARAN GAS EFESSOS (Aug -Sept 2023)
- NEREUS SHIPPING came with the dd rprs of MT PATRIOTIC (Oct- Nov 2023)

The Greek Vessels were also repaired this year, at DAMEN DUNKIRK SHIPYARD:

- BLUE SEAS SHIPPING with MV SEAGULL (Jan 2023)
- CHARTWORLD SHIPPING with MV CHIOS STAR (End May 2023)
- PARADISE NAVIGATION with PGC ARATOS (End July 2023)
- IONIC SHIPPING with MV IONIC ASTRAPI (Mid Aug 2023)
- AEGEAN SHIPPING with MT GREEN ATTITUDE (Oct -Nov 2023)
- HORIZON TANKERS with MT HORIZON ARMONIA (Nov 2023)

DAMEN CURACAO SHIPYARD could not offer dd slots for the Greek Spot Market for this year since they requested dd plans and firm bookings many months, in advance, which was impossible. Therefore, the number of Greek vsls there, was low:

- E-TANKERS MARITIME with MT E-PIONEER (Sept 2023)
- ENTERPRISES SHIPPING AND TRADING with MV DYNAMIC STRIKE (Sept 2023)

In the heart of Black Sea Area, DAMEN MANGALIA SHIPYARDS with the best location and advanced facilities and performance signed agreements for dd repairs, Scrubber and BWT retrofits with the following Customers:

- ELETSON CORP with MT DUOMO SQUARE (Febr 2023)
- TMS TANKERS with
- MT CARMEL (April 2023)
- MT DALI (July 2023)
- MT SARASOTA (Aug 2023)
- MT BURRY (Sept 2023)
- MT FONTANA (Nov 2023)
- XT HOLDINGS with MV MH COLUMBIA (May 2023)
- TSAKOS SHIPPING with
- MT SOCRATES (June 2023)
- MT SELECAO (July 2023)

The most popular destination and preference of the Greek Customers for their serious repairs and due to the big size of their vsls, is

- DAMEN ROTTERDAM and DAMEN VEROLME SHIPYARDS which hosted this year a big number of Greek vessels :
- NEREUS SHIPPING with MT SPEEDWAY (March 2023)
- COSTAMARE SHIPPING with MSC ATHENS (March 2023)
- MINERVA MARINE with MV MINERVA NOUNOU (May 2023)
- EURONAV with 1) MT CAP QUEBEC (Mid May 2023) and 2) MT CAP PEMBRUKE (Mid June 2023)



A message from DAMEN's CEO,
Mr Arnout Damen
"Over the last year, we have continued, with our partners to work towards our goals in order to better support our clients."

DAMEN AIR CAVITY SYSTEM (DACS)

AIR LUBRICATION SYSTEM FOR SHIPS - TOWARDS ZERO-EMISSION SHIPPING

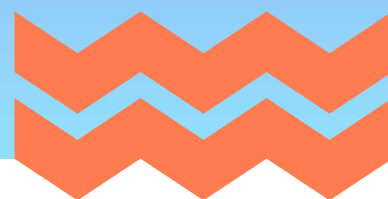
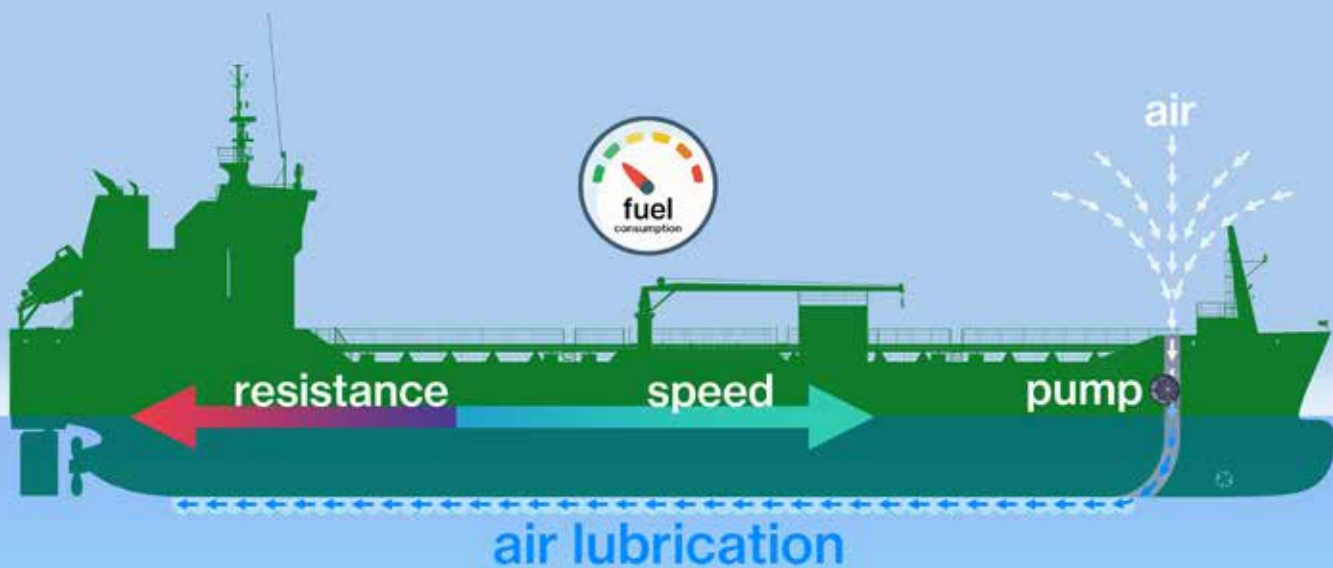
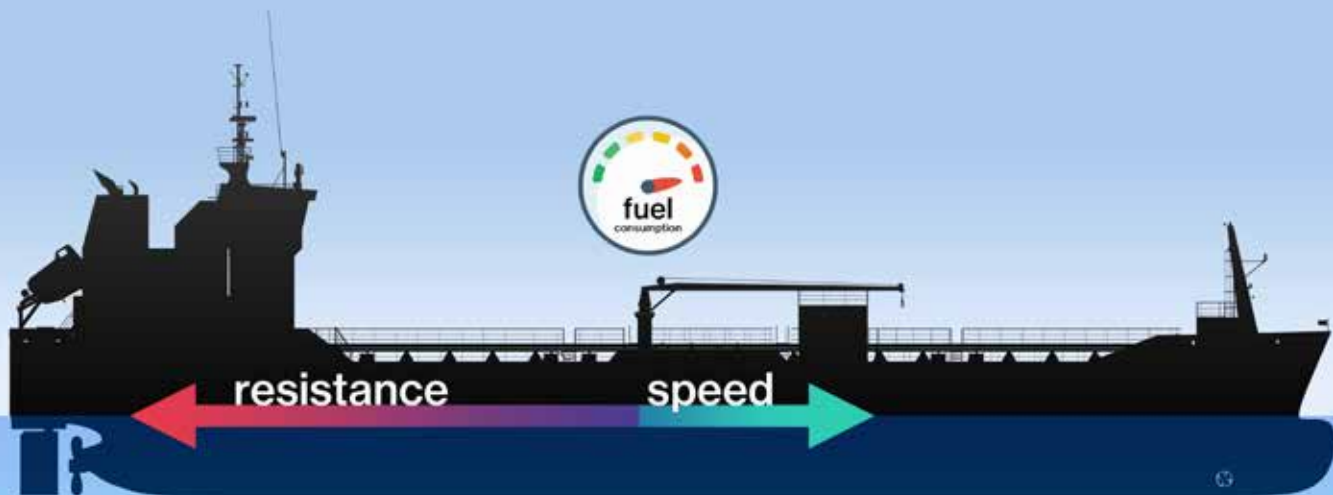
Emission-free sailing is now more important than ever for seagoing vessels and inland shipping. With the introduction of the **Carbon Intensity Indicator (CII)**, it is Damen's responsibility to not only help you comply with these regulations, but also to benefit from impressive **savings of fuel consumption of more than 10%**. Our air lubrication system for vessels can even achieve a fuel reduction of up to 15%.

Vessel type	Length o.a. [m]	Beam [m]	Draft [m]	Speed [kn]	Savings [%]	Compressor power [kW]
Inland WV	110	11.4	1.8	11	10-15	15
Inland WV	110	11.4	3.5	11	8-12	20
Short Sea	90	12.5	5.5	11	5-6	22
Short Sea	86.6	15.2	6.5	12	5-6	44
Short Sea	116	16.2	6.5	13	6-7	60
Bulker Handysize	180	30	10	12	7-9	180
Bulker Handymax	190	32.26	12	13	7-9	180
Bulker Panamax	225	32.26	14	12	8-10	220
Bulker Capesize	289	45	18	11	8-10	300
Tanker Coastal	205	29	16	12	7-9	220
Tanker Aframax	245	34	20	12	8-10	300
Tanker Suez-Max	285	45	23	11	8-10	360
Tanker VLCC	330	55	28	11	8-10	440
Containership	180	25	10	16	4-7	180
Containership	250	32	12.5	15	4-7	300
Containership	300	40	13	15	4-7	360
Containership	366	49	15.2	15	4-7	440
Containership	400	59	16	15	4-7	550
Ferry	186	25.6	6.5	19	3-6	180
Ferry	186	25.6	6.5	23	3-6	300
Ferry	220	31	6.5	18	4-7	220
Ferry	240	32	6.5	17	4-7	180
Cruise ship	255	31	8	19	4-7	300
Cruise ship	295	32	8	20	4-7	360
Cruise ship	330	38	8	21	4-7	440

The **Damen Air Cavity System (DACS)**, a unique air lubrication system for vessels, originated from a cooperation between **Damen** and **Delft University of Technology**. Maintaining a thin layer of air over the flat bottom of a vessel's hull, DACS achieves a significant reduction in water resistance, leading to increased efficiency and a reduction of fuel consumption and, therefore, emissions.

www.yardtech.gr

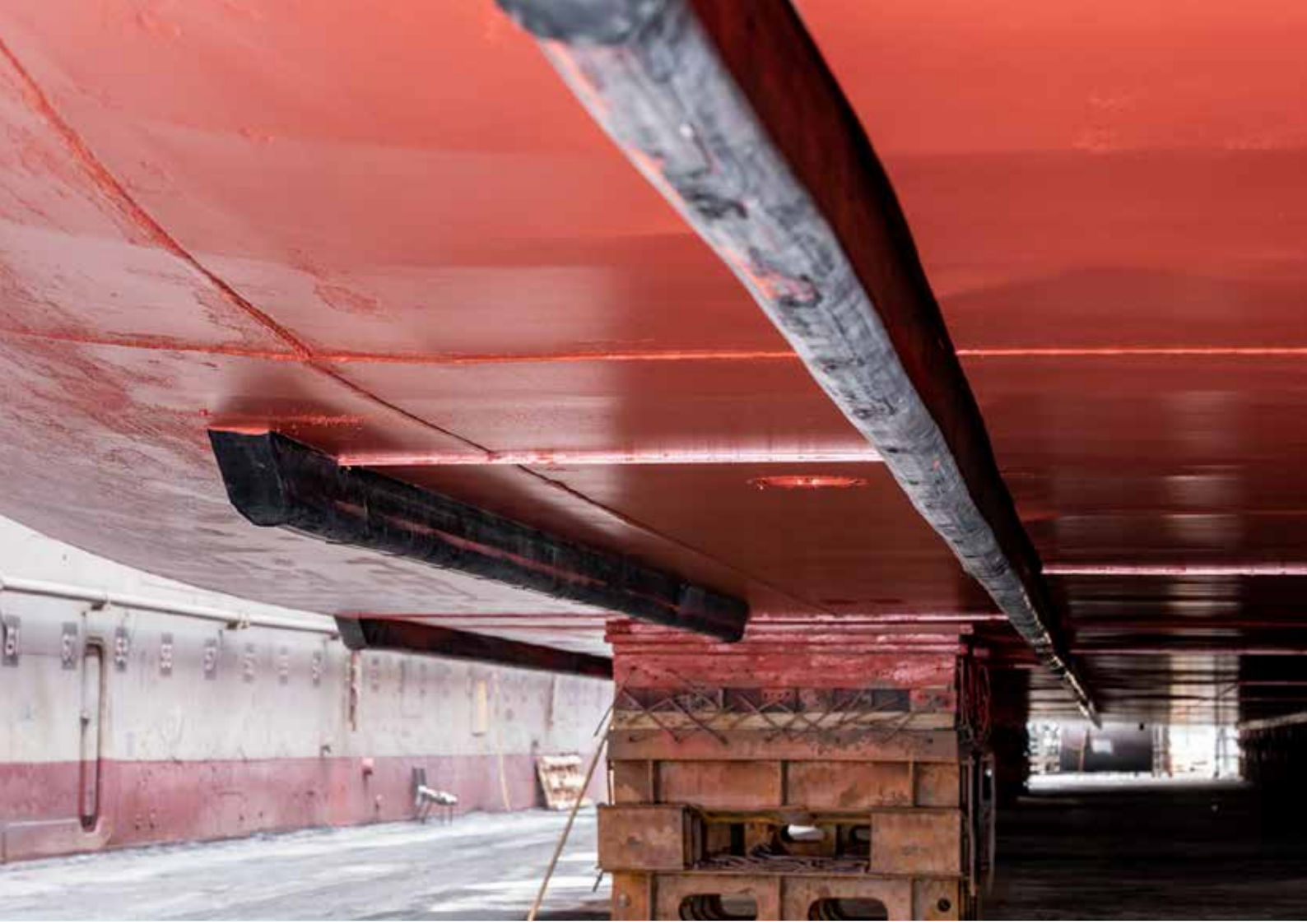
<https://www.damen.com/equipment/green-solutions/damen-air-cavity-system>



Damen Air Cavity System

CONTRIBUTES TO LOW EMISSION SHIPPING

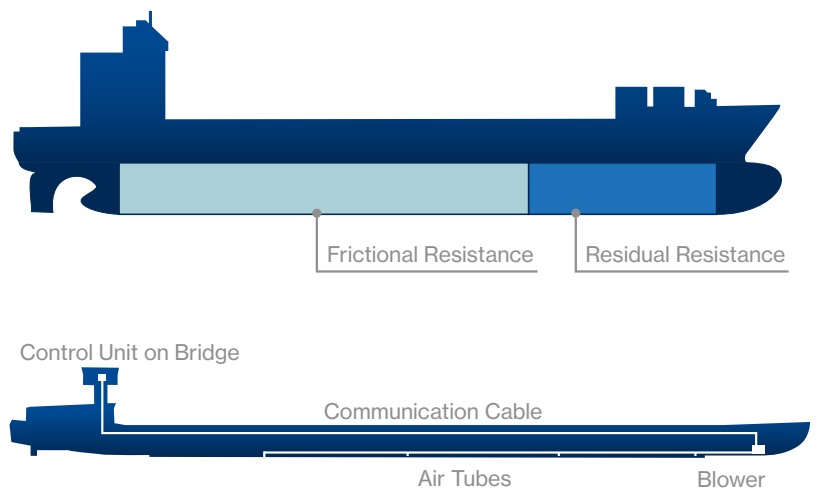
DAMEN
OCEANS OF POSSIBILITIES



Damen Air Cavity System

The Damen Air Cavity System (DACS) originated from a research project at the Delft University of Technology (TU Delft) in the Netherlands. Maintaining a thin layer of air over the flat bottom of a vessel's hull, DACS achieves a significant reduction in water resistance, leading to increased efficiency and a reduction of fuel consumption and, therefore, emissions.

Lowering the ship resistance results in the reduction of the fuel/energy consumption and emissions. The hull optimisation generally helps to reduce the wave making and pressure resistance whereas the frictional resistance, which is dominant, considered as given and it is proportional to the wetted area. Damen Air Cavity System DACS forms stable air cavities on the flat bottom of a ship. The system has a high overall efficiency and can be used on ships for fuel consumption and emission reduction.



Inland waterway ships

Inland waterway ships have a large flat bottom area and they sail at relatively low speeds, often in shallow water. This is why for this type of ship the relative fuel consumption reduction by DACS is the highest. The fuel savings and emission reduction is between 10 and 20%.

Seagoing ships

Depending on a ship type the saving on seagoing vessels are between 5 and 12%. Although the relative saving are smaller compare to the inland waterway vessels the absolute values are often much larger. This is because seagoing ships are larger in size, have more installed power and sailing at higher speed.

Examples of covered area by DACS for different ship types

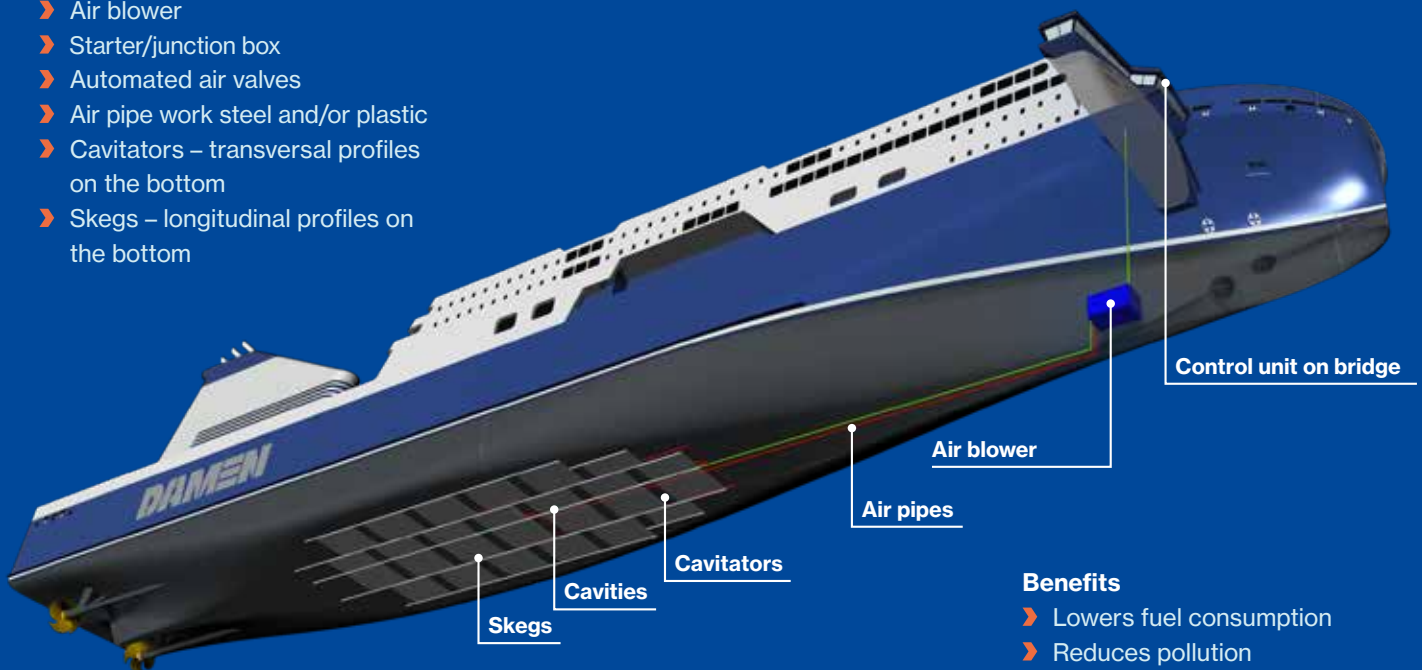


DACS components

DACS layout

DACS includes the following components integrated into a ship:

- › Bridge control and alarm panel
- › Air blower
- › Starter/junction box
- › Automated air valves
- › Air pipe work steel and/or plastic
- › Cavitators – transversal profiles on the bottom
- › Skegs – longitudinal profiles on the bottom



Benefits

- › Lowers fuel consumption
- › Reduces pollution
- › Reduces the negative effect of resistance by fouling
- › Qualified for Green Award
- › Qualified for EIA tax reduction (for Dutch flag vessels)
- › Promises accounted in EEDI & EEXI





Towards zero-emission shipping

Emission-free sailing is now becoming feasible for inland and short sea navigation. Electrically-driven ships use batteries or electricity generated on board from 'clean' fuels such as hydrogen.

Wide application of emission-free ships is currently limited by energy storage and production capacity, as well as the associated high costs. As such, energy efficiency

is especially critical for such vessels. Its potential to reduce the fuel consumption / reduce the (Electrical) power consumption / reduce propulsion power of ships, can reduce the size of the energy generation and storage system or extend the vessel's range. The benefits for battery powered vessels are reduced battery size and weight, as well as charging time.



- **Reduce up to 12% on your fuel consumption.**
- **Improve CII and EXI rating by reducing CO₂ emission**
- **Result: Lower CO₂ taxes.**



- **Contact us today for a personalised offer.**
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OCEANS OF POSSIBILITIES

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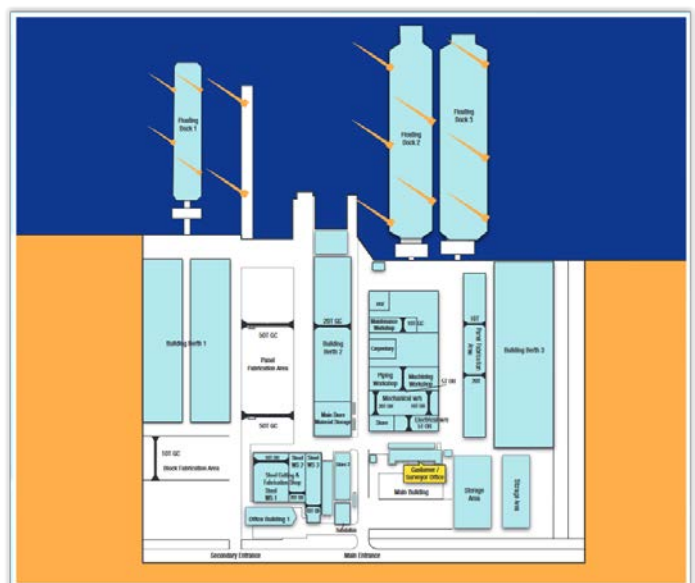
INDEX-COOL GROUPS OF COMPANIES

- **INDEX COOL GROUP OF COMPANIES** is located in the most popular port of Far East, Singapore.
Is equipped with a strong and expert team who supports “Round - the - Clock”, repairs at afloat, anchorage, on - voyage and in the shipyard as a subcontractor .
Most of the Greek Customers with often calls of their fleet in Singapore, use this Group with successful results.
- **INDEX-COOL GROUPS OF COMPANIES** have widened their scope of works to their valued customers as append below:
 - 1) Carryout health check of Aircon/Cold Room & Refrigeration System including maintenance, troubleshooting and repairs.
Supply and fabrication of new ducting and fittings (GI/Mild Steel/Stainless Steel Plate).
Carry out ducting cleaning onboard vessels.
 - 2) Overhauling and servicing of all types of Aircon Compressor and replacement of compressor spare parts.
 - 3) Overhaul, repair and rewinding of Electric Motors, Alternators.
 - 4) Manufacturing of new engine coolers, condenser, radiator and retubing of condenser.
 - 5) Provide cargo hold and tanking services onboard vessels.
 - 6) Supply and fabrication of all types of deck mushroom ventilator, gooseneck and louvres.
 - 7) Overhaul and repair of all types of hydraulic rams, cylinders, pumps etc related to the Hydraulic System.
 - 8) Carry out the change of vessel name and painting of ship's logo of the funnel onboard the vessel.
 - 9) Repair and maintenance of various types of switchboard, electrical control panel, replacement of printed circuit board and spare parts.
Provide cable pulling services onboard vessels.
 - 10) Reimbursement/Upgrading of Carpentry Work, supply of gallery equipment, upholstery, curtain, replacement of carpet/tile flooring, etc.

OFFICIAL SUBCONTRACTOR OF ALL THE SINGAPOREAN SHIPYARDS <https://index-cool.com.sg/>

- **INDEX-COOL**, engaged in the Singapore Marine Industry since 1977, providing afloat marine repairs and services at anchorage or on - voyage now cooperates with **PAXOCEAN**
- **PAXOCEAN** offers end to end engineering services supporting the complete life cycle of maritime and offshore assets. Leveraging the Company's core competencies and technical know-how, **PAXOCEAN** helps its customers build, repair, decommission and recycle maritime assets for an environmentally sustainable future.

PAXOCEAN SINGAPORE		YARD FACILITIES (YARD SITE - 110,000 m ²)
○ Floating Dock 1	122.0m x 22.8m	3,400 TLC
○ Floating Dock 2	195.0m x 34.7m	16,000 TLC
○ Floating Dock 3	187.5m x 36.5m	16,000 TLC
○ Berthing Wharf	900m	
○ Building Berths	3 sites for vessels up to 20,000 DWT	
○ Cranes	up to 250 tons SWL	
○ Overhead Cranes	up to 50 tons SWL in workshops	



KINGFISHER MARINE SERVICES

1. Energy Saving Solutions

a) Client: Precious Shipping, Ship Name: Charana Naree

Work Scope: i) Delivery of Hub Vortex Absorbed Fins (HVAF) and Pre-Shrouded Vanes (PSV) ii) Delivery of propeller trimming drawing and jobs done in the dockyard

b) Client: Panbulk, Ship Name: Ripley Prosperity

Work Scope: Delivery of Hub Vortex Absorbed Fins (HVAF)

c) Client: Precious Shipping

Work Scope: Delivered Hub Vortex Absorbed Fins (HVAF) and Pre-Shrouded Vanes (PSV), conducted propeller trimming

d) Client: Panbulk

Work Scope: Delivered Hub Vortex Absorbed Fins (HVAF)

2. Project management and supervision

a) Client: Zitong, Ship Name: Wind Energy

Work Scope: drydocking supervision and site management in Jinling Weihai Shipyard

b) Client: Maersk, Ship Name: Maersk Rio Negro

Work Scope: BWTS retrofitting supervision in Guangzhou

c) Client: Zitong

Work Scope: BWTS retrofitting supervision in Guangzhou

d) Client: Maersk

Work Scope: Docking site management in Weihai

3. Repairs

a) Steering Gear Overhaul

Client: Columbia Shipmanagement, Ship Name: Ken Goh

Work Scope: i) Hydraulic pump, valve block overhauls; O-ring and gasket, filter and bearing replacement; final function test; ii) Ram pin bushes replacement; stopper pins and around accessory parts replacement; guide bar bearing bush replacement; renewal cylinder packings

b) M/E and A/E Overhaul

Client: Mercantile, Ship Name: Ocean Glory

Work Scope: i) A/E governor standard overhaul ii) Aux engine T/C standard overhaul iii) M/E fuel pump overhaul iv) M/E pneumatic control system overhaul v) A/E flywheel ring gear renewal



ABOUT KINGFISHER

Kingfisher (Shanghai) Marine Services, founded in 2015, is a comprehensive maritime service company, specializing in ship maintenance and repair, retrofit, inspection, supervision, spare parts supply, technical consulting and other services for the international shipping market.

Kingfisher has a group of highly professional, experienced and enthusiastic engineers, who graduated from the first-class universities, and have many years of practical experience in marine industries, such as shipyards, classification societies, design institutes, shipping companies, major equipment makers.

Kingfisher enjoys the good and long-term cooperation with dockyards, makers and suppliers, as well as the support from preferential policies and service networks.

c) Deck Crane Rocking Test**Client:** Ranger, **Ship Name:** Larus

Work Scope: Four sets of deck crane rocking test and providing the measurement table for slewing bearing

d) Lifeboat & Davit Inspection**Client:** Columbia Shipmanagement, **Ship Name:** Ken Voyager

Work Scope: Life boat and davit annual survey

e) Boiler Inspection**Client:** Columbia Shipmanagement**Ship Name:** Ken Kon

Work Scope: Boiler health checking for control system, conduct tube fiberscope inspection.

f) Shaft Bearing Inspection**Client:** Chellaram Shipping**Ship Name:** Darya Sita

Workscope: Open the top cover, remove the bottom bearing out, polish the bottom bearing, jack up test for intermediate bearing before and after bearing remove.

g) Automation System Service**Ship Name:** Nodus

Workscope: Supply with new programed computer and bring the KONGSBERG AMS KC500 system back to normal working.

4. New Energy-Saving Technology Application under Negotiation

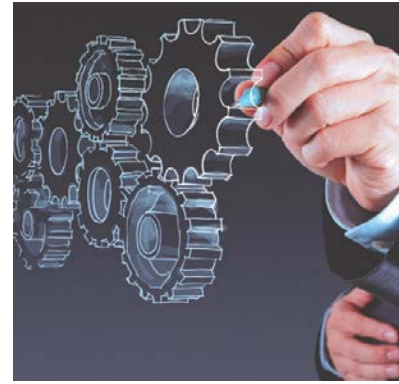
a) Intelligent Monitoring and Alarm System

b) Wind Rotor

c) New Propeller Design

d) Alternative Maritime Power System

e) Marine Wind-Solar Storage Integrated System

***SERVICES PROVIDED***

- Docking agency, project management and supervision, ship maintenances and repairs
- Marine consultancy for EEXI & CII compliance with energy saving solution and ship retrofits
- Spares and stores supply with genuine/OEM/customized parts
- Marine products research and development driven by technology and innovation



*We rely on a constant attention to quality and dedication to the Customers.
Our aim is to deeply analyze Customers' needs and to satisfy them.*



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