

## Navigating Wind Propulsion

Interested in how ships can harness the power of the wind? Follow the Wind Propulsion route below to discover all of the wind-assist and primary wind propulsion technologies being showcased at SMM by technology providers, class societies and shipping lines. Embark on a voyage of discovery of all things wind propulsion, by following this map and attending key events!

### A3

bound4blue

#### Hall A3, Stand 413 bound4blue

Complying with regulations while increasing your profits is possible with our suction sail (eSAIL®). It is a validated technology, with low maintenance, quick & easy installation, fully automated, and offers the highest lift-to-drag and lift-to-power ratios.  
[www.bound4blue.com](http://www.bound4blue.com)

LIEBHERR

#### Hall A3, Stand 306 Liebherr-Components AG

Liebherr makes use of the wind for clean energy shipping, having developed a completely pre-assembled modular electric adjustment system for wind-assisted propulsion for a wide variety of vessel types.  
[www.liebherr.com/components-maritime](http://www.liebherr.com/components-maritime)

airseas

#### Hall A3, Stand 203 Airseas

An industrial firm which has come out of Airbus, dedicated to delivering the Seawing system, an automated power kite able to tow commercial ships operating as an auxiliary to the engines.  
[www.airseas.com](http://www.airseas.com)

### A1

OCEANBIRD

#### Hall A1, Stand 226 Oceanbird

Represented on the Alfa Laval Stand. Innovative Swedish technology making it possible to power the largest ocean-going vessels by wind. Wallenius & Alfa Laval have joined forces to deliver the first Oceanbird vessel, a specially designed car-carrier, with other segments and retrofits to come.  
[www.theoceanbird.com](http://www.theoceanbird.com)

becker marine systems

#### Hall A1, Stand 225 Becker Marine Systems

Developed two types of Anti-Drift-Systems necessary to compensate the aerodynamic lateral force of wind-assisted ships that help powerful modern rigs fully exploit their potential.  
[www.becker-marine-systems.com](http://www.becker-marine-systems.com)

### A4

A4 RO

#### Hall A4, Stand 232 AYRO SAS

Wind propulsion system that saves up to 45% of carbon emissions. The two-element system & aerodynamic profile of Oceanwings® allow a performance 2x that of conventional sails, propulsive on wind angles very close to the ship's axis & adapts to the wind configuration. Flexible, retractable, patented and fully automated, it doesn't require sailing skills.  
[www.ayro.fr](http://www.ayro.fr)

MARIKO

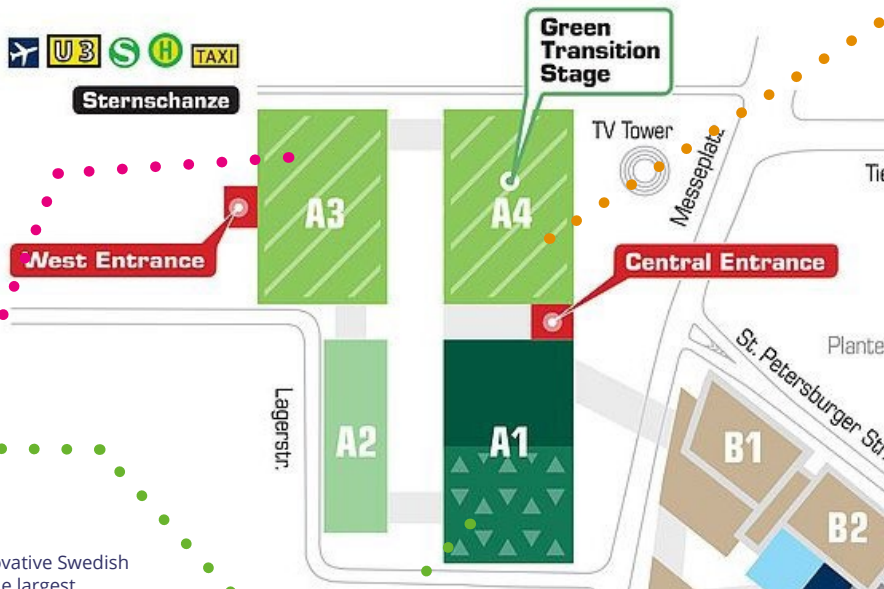
#### Hall A4, Stand 324 MARIKO

A company with an interface function for the maritime industry and science, including developing and coordinating R&D and innovation projects. This has included wind propulsion tech, especially focusing on Flettner Rotors.  
[www.mariko-leer.de](http://www.mariko-leer.de)

THORDON

#### Hall A4, Stand 123 Thordon Bearings Inc.

Designs and manufactures a complete range of journal bearing and seal systems for marine, clean power generation, pump and other industrial markets with product ranges applicable to wind assisted propulsion systems.  
[www.thordonbearings.com](http://www.thordonbearings.com)



SICK  
Sensor Intelligence.

#### Hall A1, Stand 146 SICK AG

Innovative wind propulsion requires a high degree of automation. SICK supplies the right sensors for this.  
[www.sick.de](http://www.sick.de)

**Wind Propulsion Tech**

**Research & Development**

**Testing & Validating**

**Panels & Seminars**

**Newbuild & Retrofit**

**New Concepts & Designs**



**Hall B1.OG, Stand 211**  
**Norsepower Oy Ltd**  
Norsepower the leading provider of auxiliary wind propulsion systems. Norsepower's proven and verified Rotor Sails maximise ship fuel efficiency and address the industry's pressure to meet upcoming energy efficiency regulation.  
[www.norsepower.com](http://www.norsepower.com)



**Hall B1.OG, Stand 201**  
**Deltamarin Oy**  
Deltamarin Group has 30 years of experience in providing ship design, offshore engineering and construction support services for marine and offshore industries.  
<https://deltamarin.com>



**Hall B7, Stand 474**  
**Eco Flettner GmbH**  
The Eco Flettner Rotor with two end plates represents a high performance Wind Assisted Propulsion System (WAPS)  
<https://ecoflettner.de>



**Hall B7, Stand 501 "Startup corner"**  
**Blue Wasp Marine**  
An engineering consultancy specialized in wind assisted ship propulsion. We offer expert technical advice and unbiased performance predictions to the shipping industry.  
[www.bluewaspmarine.com](http://www.bluewaspmarine.com)



**Hall B7, Stand 304**  
**Yara Marine Technologies**  
Since 2010, YMT has been at the forefront of maritime emissions reduction, working closely with ship-owners, yards, and naval architects. Today, YMT offers a portfolio of green technologies including the cutting-edge, advanced wind-assisted propulsion system WindWings.  
[www.yaramarine.com](http://www.yaramarine.com)



**Hall B7, Stand 751**  
**Syroco**  
Developed a digital twin platform to optimise the energy efficiency of ships. Syroco EfficientShip simulates accurately the behaviour of the ship on specific routes and conditions enabling use cases including: wind assistance efficiency prediction, fuel calculation, carbon emissions reduction etc.  
[www.syro.co](http://www.syro.co)



**Hall B7, Stand 432.1**  
**MOL Techno-Trade, Ltd. & Mitsui O.S.K. Lines, Ltd.**  
Focus on coping with the worldwide environmental issues with environment friendly technologies and products. Line up: Wind Challenger, Wind Hunter (zero emission concept by wind & hydrogen), PBCF (Propeller Boss Cap Fins) - world's best-selling energy saving device for ships, etc  
MOL Techno-Trade: [www.motech.co.jp](http://www.motech.co.jp)  
MOL: [www.mol.co.jp](http://www.mol.co.jp)

**B1**



**Hall B2.EG, Stand 415**  
**Chantiers de L'Atlantique**  
After 6 years of development, the SOLID SAIL technology by Chantiers de l'Atlantique is ready and class approved to put out to sea for a decarbonized shipping.  
[www.chantiers-atlantique.com](http://www.chantiers-atlantique.com)



**Hall B2.EG, Stand 212**  
**ClassNK (NIPPON KAIJI KYOKAI)**  
Through its role as the third-party certification body, ClassNK continues bringing new technology into widespread use for brighter and sustainable future.  
[www.classnk.com](http://www.classnk.com)



**Hall B2.EG, Stand 320**  
**MARIN Maritime Research Institute Netherlands**  
A globally recognised top institute for hydrodynamic, aerodynamic and nautical research. Our mission is 'Better Ships, Blue Oceans' we stand for clean, smart and safe shipping and sustainable use of the sea.  
[www.marin.nl](http://www.marin.nl)



**Hall B2.EG, Stand 411**  
**NAOS Ship & Boats Design**  
Specialist in Ro-Ro Ships & RoPax-Ferries, developing a modular wing system for application on many different ship types, generally without negative interaction with cargo/equipment.  
[www.naos-design.com](http://www.naos-design.com)

**B2**



**Hall B3.EG, Stand 200**  
**ABS**  
A leading provider of classification and technical advisory services to the marine and offshore industries, is committed to setting standards for safety and excellence in design, construction and operation. Committed to support, promote and develop sustainability-oriented technologies including Wind Assisted and Wind Powered vessels.  
[www.eagle.org](http://www.eagle.org)



**Hall B3.EG, Stand 103**  
**Bureau Veritas Marine & Offshore**  
Shaping a better maritime world. Pioneering the safety and performance of new technologies since 1828, we are a leading classification society and offshore verification body. We support clients with practical advice, tools and technology to help run safe, sustainable and high performing businesses.  
[www.bureauveritas.com](http://www.bureauveritas.com)



**Hall B4.EG, Stand 310**  
**RINA**  
IACS member classification society deeply involved in Wind-Assisted Ship Propulsion (WASP) supporting makers/yards/owners for WASP tech. certification with a significant amount of sailing ships under its classification.  
[www.rina.org](http://www.rina.org)



**Hall B4.EG, Stand 108**  
**Hamburg Ship Model Basin - HSVA**  
A maritime service and consulting company contributing to a greener, more sustainable usage of marine environments, reducing emissions & increased safety in marine transportation. We offer world class testing facilities and a most competent partner in the fields of maritime hydrodynamics, maritime aerodynamics and arctic technology etc.  
[www.hsva.de](http://www.hsva.de)

**B4**



**Hall B6, Stand 148**  
**Vaisala Oy**  
A global leader in weather, environmental, and industrial measurements. We provide diverse portfolio of weather monitoring instruments and systems to ports, coastal monitoring, shipping, helideck, and offshore operations enhancing their safety and efficiency.  
[www.vaisala.com](http://www.vaisala.com)



**Hall B6, Stand 309**  
**Wärtsilä**  
Wärtsilä is integrating wind assisted propulsion solutions as a part of the environmental solutions we are offering to the market.  
[www.wartsila.com](http://www.wartsila.com)



**Hall B6 Stand 327**  
**Fraunhofer Working Group Sustainable Maritime Mobility**  
Design, construction, and operation of trendsetting wind propulsion systems  
[www.iwes.fraunhofer.de](http://www.iwes.fraunhofer.de)

**B6**



**B7**



For more information about SMM 2022, visit  
<https://www.smm-hamburg.com/en/>

## Events at SMM

### GMEC Conference

(Room Chicago / A-Area)

**[7th Sep] - Panel IV - Wind propulsion - the time is now!** 14:45 - 15:45

Gavin Allwright, Secretary General, International Windship Association  
[www.wind-ship.org](http://www.wind-ship.org)

Prof Dr Orestis Schinas, Partner HHX. Blue  
<http://hhx.blue>

Cristina Aleixendri, COO & Co-Founder, bound4blue  
[www.bound4blue.com](http://www.bound4blue.com)

Johan Boomsma, CEO, managing partner, Boomsma Shipping  
[www.boomsmashipping.nl](http://www.boomsmashipping.nl)

Britta Schulz, Services Manager, North and Central Europe, Bureau Veritas  
[www.bureauveritas.com](http://www.bureauveritas.com)

Wind propulsion and wind-assisted propulsion are becoming increasingly attractive to the shipping industry as decarbonisation takes centre stage and the transition to a zero carbon future raises the prospect of higher fuel costs. This session will look at cutting edge versions of what is a centuries-old solution to zero carbon transport. The panel will discuss recent and ongoing trials and deployments of various wind propulsion solutions, the current state of the technologies, the economics of wind propulsion and the benefits and limitations of harnessing the wind for ships.



### Tradewinds Shipowners' Forum (Room Chicago / A-Area) [6th Sep] 14:20 - 15:10

**SESSION ONE: From good intentions to action: Implementing strategy to deliver results - panelist** Cristina Aleixendri, COO & Co-Founder, bound4blue  
[www.bound4blue.com](http://www.bound4blue.com)

### Green Transition Stage (Hall A4) [7th Sep]

**10:45-10:55 Wind-assisted propulsion: harness the wind with Liebherr,** Benjamin Schmid, Key Account Manager, Maritime, [www.liebherr.com](http://www.liebherr.com)

Liebherr makes use of the wind as a resource for clean energy shipping, as well, and contributes to wind-assisted propulsion as potential alternative. The electric adjustment system for the wind-assisted propulsion is a completely pre-assembled module. It consists of a slewing bearing, a slewing drive and an electric motor. Together with control and power electronics built into a control cabinet, it makes the sail turn. The overall design of the wind-assisted propulsion consists of high, futuristic-looking sails that turn towards the wind and complement conventional ship propulsion.

**11:40-11:50 - The environmental challenge of maritime transportation** What are the challenges for maritime transportation, and how the wind propulsion is the answer to reduce significantly carbon emissions - Romain Grandsart, Chief Business Officer, AYRO [www.ayro.fr](http://www.ayro.fr)

**EU Commission Stand (Hall A3, Stand 203) [8th Sep] - 11:40-12:00**

Day 3 - Clean and Sustainable Waterborne Transport Session

**Wind-assistance: European Maritime & Fisheries Fund Project: SEAWING4Blue** - Vincent Bernatets, CEO, Airseas [www.airseas.com](http://www.airseas.com)



### Wind Assisted Ship Propulsion (WASP) Project Conference (Hall B3, Room Copenhagen 3)

**[7th Sep] 10:00-17:00** - open event with multiple speakers & panel discussions.  
<https://northsearegion.eu/wasp/>

#### 10:00 - 11:45: Session I: First-hand experiences with Wind Assisted Ship Propulsion

Technology Providers: Norsepower, Econowind, Ecofleetnet  
 Shipowners: Scandlines, Rord Braren, Van Dam Shipping

#### 12:30 - 14:00: Session II: Results of, and predictions for Wind Assisted Ship Propulsion

Sea trials: Methodology and results - SSPA  
 Generic energy systems ship performance models - Chalmers University  
 Digital twins for optimizing the energy capture of WPTs - KU Leuven  
 Design optimization using performance prediction software - Blue Wasp Marine

#### 15:00 - 16:30: Session III: Finance & Policies for Wind Assisted Ship Propulsion

Political regulation to promote WASP - Green Transition Denmark  
 Decision support model - Kuhne Logistics University  
 Financial engineering, digital self-assessment tool - HHx Blue

**16:30 - 17:00: Drinks at Netherlands Maritime Technology, Holland Pavilion (Hall B7, Stand 508)**



Interreg  
 North Sea Region  
 WASP  
 European Regional Development Fund



## Other Wind Propulsion Events in Hamburg

### Reception & Networking Event: Wind Propulsion Seminar - Japan Pavilion [6th Sep]

18:00-20:30,  
 Empire Riverside Hotel 2F [Invitation only]  
 Hosted by the Japan Ship Machinery & Equipment Association (JSMEA).

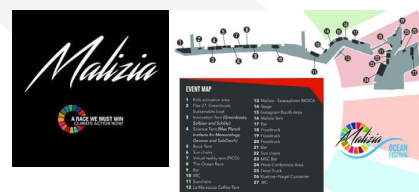
Speakers will be Gavin Allwright, Secretary General, International Windship Association & Makoto Yamaguchi, Executive Officer, Mitsui OSK Lines.



### 1st Malizia Ocean Festival - Sandtorhafen in Hamburg HafenCity [6th & 7th Sep] 10:00-22:00+

A large two-day event and a new boat, Team Malizia want to share the adventure of our sport with the German public and our partners who have supported us since the start of the Vendée Globe. This public event features highlights such as the christening of the new Malizia - Seaexplorer, as well as exciting events and tents including exhibitions on sustainable shipping, sustainable materials, coral protection and virtual reality experiences. Live music, food trucks and fresh drinks will contribute to a festive ambience on the pontoon of the Traditionsschiffhafen and the Magellan Terrassen.

More details: [www.borisherrmannracing.com](http://www.borisherrmannracing.com)



### Peking 2.0 Symposium: Connection of past, present and future (German)

German Harbour Museum [6th Sep] 09:00-20:00

The symposium will focus on current use of sailing ships, shed light on perspectives from the past, present current tendencies for discussion, identify innovative ideas for the future and create a forum for the scientific and create practical shipbuilding exchange. The lectures can be experienced digitally via live stream. The lectures will be broadcast directly from the four-masted barque Peking.

More details and program of speakers:  
<https://shm.de/en/symposium-peking>

