

Breakout Session

SSD 2026
29 – 30 June 

Lucerne, Switzerland 

SUSTAINABLE SHIPPING DAYS

Electrolysers & Fuel Cells for waterborne transport

SB1-4

Parallel



Overview

■ SB1

PEM Fuel Cell Applications in the Maritime Sector:

High-Durability and High-Power-Density PEMFC Stacks, Advanced Diagnostics and Monitoring Procedures

■ SB2

Hydrogen as Cargo and Fuel in Maritime Sector:

R&D&I Applications from the LH2CRAFT and SAFeCRAFT Projects - Highlights, Lessons Learned and Key Challenges for H2 applications in the waterborne sector

■ SB3

Maritime SOFC drivetrains:

Key findings of research projects NAUTILUS & HELENUS

■ SB4

Maritime Hydrogen Shipping Projects in Northern Europe (Further details coming soon)

Free Breakout Sessions: Register at www.SSDship.com/SBregistration



Organised by EFCF

www.SSDship.com

European Electrolyser & Fuel Cell Forum • info@SSDship.com

Breakout Session Overview

SSD 2026 features four dynamic parallel breakout sessions bringing together leading EU projects, industry experts, and innovators shaping the future of sustainable shipping. Explore real-world applications of PEM fuel cells, hydrogen technologies, SOFC drivetrains, and maritime decarbonization strategies through highly focused and interactive mini-events. Gain direct insights into flagship projects including H2Marine, MiNaMi, LH2CRAFT, SAFeCRAFT, NAUTILUS, and HELENUS. The sessions provide valuable opportunities for discussion, networking, collaboration, and technology exchange within the international maritime hydrogen community. Join us in Lucerne and connect with the key players driving the maritime energy transition forward.

REGISTER FREE FOR BREAKOUT SESSIONS at: www.SSDship.com/SBregistration



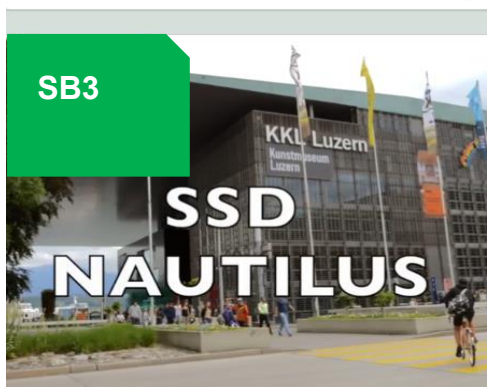
PEM fuel cells applications in the maritime sector

SB1: Monday 29 June 2026, 17: 15 - 18: 45 (parallel)
Auditorium, Lucerne KKL/Switzerland
Featuring:
High durability & High Power Density PEMFC stacks
Advanced diagnostics and monitoring procedures



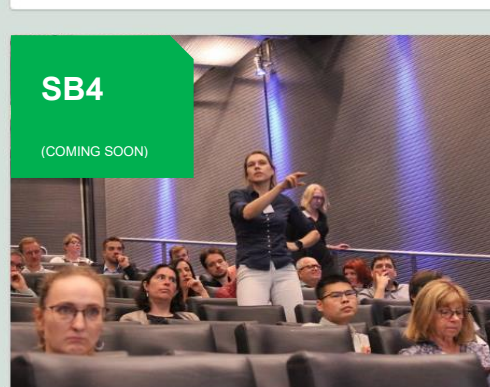
Hydrogen as cargo and fuel in maritime sector R&D&I applications

SB2: Monday 29 June 2026, 17: 15 - 18: 45 (parallel)
Club Rooms 3-4, Lucerne KKL/Switzerland
Featuring:
LH2CRAFT and SAFeCRAFT projects break out session – project highlights, lessons learned and key..



Maritime SOFC drivetrains

SB3: Tuesday 30 June 2026, 13: 30 - 15: 00 (parallel)
Auditorium, Lucerne KKL/Switzerland
Featuring:
Key findings of research projects NAUTILUS and HELENUS



Maritime Hydrogen Shipping Projects in Northern Europe

SB4: Tuesday 30 June 2026, 13: 30 - 15: 00 (parallel)
Auditorium, Lucerne KKL/Switzerland

PEM Fuel Cell Applications in the maritime sector

Monday 29 June 2026, 17:15 - 18:45 KKL Lucerne, Switzerland

High-Durability & High-Power-Density PEMFC stacks, Advanced Diagnostics and Monitoring Procedures

The H₂MARINE project focuses on designing, testing, and validating two 250–300 kW PEM stacks for marine use. In parallel, the MiNaMi project is developing the first MW-sized PEMFC for the maritime sector, targeting an 80,000-hour lifetime to cover over a million nautical miles at 12.5 knots. The H₂Marine & MiNaMi workshop will explore the main findings of these projects, specifically addressing challenges in stack durability, maritime environmental factors and the upscaling of FC systems.

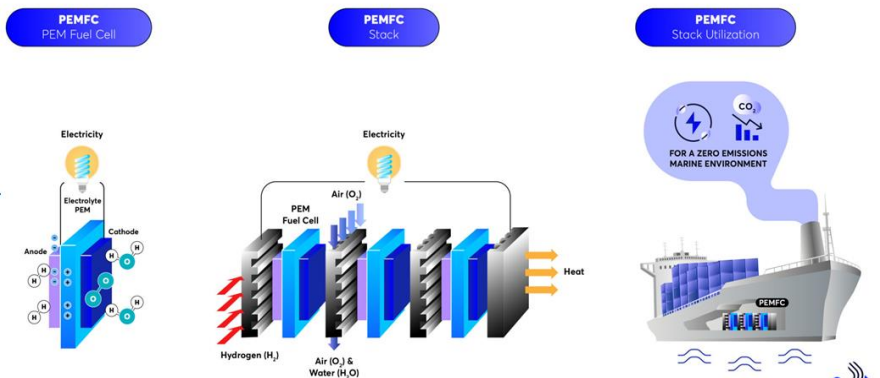
Organised by:



H₂MARINE
<https://h2marineproject.eu>



MiNaMi
MILLION NAUTICAL MILE FUEL CELL SYSTEM
<https://minami-project.eu>



H₂MARINE is supported by the Clean Hydrogen Partnership and its members Hydrogen Europe and the Swiss State Secretariat for Education Research and Innovation under grant agreement No 101137965
MiNaMi is supported by the Clean Hydrogen Partnership and its members Hydrogen Europe and Hydrogen Europe Research under grant agreement No 101250260.



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SSD 2026
29 – 30 June



H₂MARINE is supported by the Clean Hydrogen Partnership and its members, Hydrogen Europe, and the Swiss State Secretariat for Education, Research and Innovation. MiNaMi is supported by the Clean Hydrogen Partnership and its members, Hydrogen Europe, and Hydrogen Europe Research.



Breakout Session Program:

see also **SSD program**
www.SSDship.com/program

16.00	Registration & visit the SSD poster session
17.15	Welcome & Introduction
17.25	H₂Marine & MiNaMi Projects: Powering Cleaner Shipping Kyriakos Panopoulos, CPERI/CERTH, Greece
17.45	Recent findings on the development of PEMFC stacks for marine applications Andreas Bodén PowerCell Group, Sweden
18.05	Advanced diagnostics and monitoring methods for PEMFC stacks and systems in maritime applications Mikkola Jyrki VTT, Finland
18.25	Discussion panel
18.45	End of Breakout Session
19.45	SSD Sunset Dinner on the Lake

Who should join:

- OEMs of Fuel Cells, Electrolysers & Storage Systems
- Marine Fuel Suppliers
- Marine Genset Manufacturers
- Ship Yards, Ship Owners & Ship Operators
- Hydrogen transportation and logistics
- R&D specialists in the related fields
- Policy makers
- Regulatory authorities
- Inventors project developers, banks
- Classification Organisations

Registration

Free Breakout Session:

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Full SSD Conference (incl. Breakout Sessions):

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Contacts for:

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Breakout Session

Your contact

SB2 Parallel Breakout Session

Hydrogen as Cargo and Fuel in Maritime Sector R&D&I Applications

Monday, 29 June 2026, 17:15 – 18:45, KKL Lucerne, Switzerland

LH2CRAFT & SAFeCRAFT Project Highlights, Lessons Learned Key Challenges for H₂ applications in the waterborne sector.

This breakout session will present key highlights and lessons learned from the EU-funded LH2CRAFT and SAFeCRAFT projects, focusing on hydrogen-based solutions for the waterborne sector. LH2CRAFT addresses safe and efficient liquid hydrogen storage and transportation, while SAFeCRAFT explores the safe use of sustainable alternative fuels in maritime applications. Together, the projects provide insights into technical, safety, regulatory and economic challenges for H₂ applications on board vessels. Participants will gain a concise overview of project outcomes, practical lessons learned and key barriers to the wider adoption of hydrogen-based fuels in shipping.



LH₂
CRAFT

SAFe
CRAFT

Organised by: **HYDRUS** ENGINEERING EXCELLENCE www.hydrus-eng.com

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29 – 30 June

LH2CRAFT funding acknowledgement



Co-funded by
the European Union

UK participation in LH2CRAFT Project is funded by UK Research and Innovation (UKRI) under the UK government's Horizon Europe guarantee [grant numbers 10070575 and 10082044].

SAFeCRAFT funding acknowledgement



Co-funded by
the European Union

UK participation in SAFeCRAFT Project is funded by UK Research and Innovation (UKRI) under the UK government's Horizon Europe guarantee [grant number 10110519].

Breakout Session Program:

see also **SSD program**
www.SSDship.com/program

16.00	Registration & visit the SSD poster session
17.15	Introduction by Project Leaders
17.30	Project Highlights & Lessons Learned of LH2CRAFT Safe and Efficient Marine Transportation of Liquid Hydrogen Astrinos Papadakis HYDRUS Engineering S.A
17.45	Project Highlights & Lessons Learned of SAFeCRAFT Safe and Efficient Use of Sustainable Fuels in Maritime Transport Application Christos Papaleonidas Watermelon Consulting / WMG Sustainable Innovation
18.00	Pannel Discussion on Q&A Key Challenges for H ₂ applications in the waterborne sector Panellists, Moderator, and All Participants
18.35	Summary & Outlook Astrinos Papadakis HYDRUS Engineering S.A
18.45	End of Breakout Session
19.45	SSD Sunset Dinner on the Lake

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- Ship Yards, Ship Owners & Ship Operators
- Marine Safety & Classification Organisations
- Regulators, Consultants
- R&D specialists in the related fields

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Breakout Session

Your contact

SB3

Parallel Breakout Session NAUTILUS & HELENUS Projects & System integration

Maritime SOFC Drivetrains

Tuesday 30 June 2026 13.30 - 15.00, KKL Lucerne, Switzerland

Key Findings of Research Projects NAUTILUS and HELENUS

This breakout session brings together the findings of the recently completed NAUTILUS project and the ongoing HELENUS project. Both projects aim to develop multi-MW maritime SOFC drivetrains, using hybrid LNG-fueled SOFC systems for long-haul passenger ships as a reference case. Within this context, NAUTILUS delivered a land-based proof-of-concept demonstrator (60 kW_{el} + battery), while HELENUS advances the technology toward a 200 kW_{el} demonstration under relevant environmental conditions on a research vessel. The session will address key technical challenges, including drivetrain design and ship integration, maritime stressor testing, transient system operation, emissions analysis, and degradation-aware control development.

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29 – 30 June

The research has received funding from the Horizon Europe research and innovation programmes under grant agreement IDs 861647 (NAUTILUS) and 1010567 (HELENUS). Views and opinions expressed are however those of the European Union or CINEA. Neither the European Union nor the grant



Funded by
the European Union



NAUTILUS



HELENUS

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Breakout Session Program:

see also **SSD program**
www.SSDship.com/program

12.30 Lunch Break

13.30 Introduction, NAUTILUS and HELENUS project scopes

Jan Hollmann, Dheeraj Gosala
German Aerospace Centre (DLR), DE

13.40 On the Marinisation of SOFC Systems: Findings on Inclination Experiments and Hybrid Drivetrain Sizing

Berend van Veldhuizen
Feadship formerly TU Delft, NL

14.00 Operational Performance and Emissions Analysis of a natural gas-fueled Battery-hybrid SOFC System in Load-following Operation

Fabian Grimm
Everllence, formerly MAN Energy Solutions, DE

14.20 Thermal-stress aware model predictive control of maritime SOFC systems: process simulations and hardware-in-the-loop testing

Mathis de Lange
TU Delft, NL

15.00 End of Breakout Session, Coffee break in the poster area

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m.spirig@EFCF.com

SOFC Drivetrain Breakout Session

Jan Hollmann
jan.hollmann@dlr.de

SB4 Parallel Breakout Session

Maritime Hydrogen Shipping Projects in Northern Europe

Tuesday, 30 June 2026 13.30 - 15.00, KKL Lucerne, Switzerland

Coming soon

Who should join:

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- Marine Fuel Suppliers
- Marine Genset Manufacturers
- Ship Yards, Ship Owners & Ship Operators
- Marine Safety & Classification Organisations
- Regulators, Consultants
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SOFC Drivetrain Breakout Session

Jan Hollmann
jan.hollmann@dlr.de

Organised by



Join Us at SSD 2026 in Lucerne

The SB breakout sessions are part of the wider SSD 2026 conference programme, bringing together leading experts, EU projects, industry partners, and maritime decarbonization stakeholders.

Explore the full programme, keynote lectures, networking events, and registration information in the SSD 2026 Final Announcement.

Final Announcement:

www.SSDship.com/FA

Registration:

www.SSDship.com/REGISTRATION

Website:

www.SSDship.com