

Breakout Session

SSD 2026
29 – 30 June 

Lucerne, Switzerland 

SUSTAINABLE SHIPPING DAYS

Electrolysers & Fuel Cells for waterborne transport



SB3

Parallel

Maritime SOFC Drivetrains

NAUTILUS & HELENUS Projects - EU-funded Horizon 2020 / Horizon Europe projects

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

Key Findings of Research Projects NAUTILUS and HELENUS

Partners: German Aerospace Center (DLR), Chantiers de l'Atlantique, Carnival Maritime GmbH, École Polytechnique Fédérale de Lausanne (EPFL), GRANT Garant, Lloyd's Register EMEA, MAN Energy Solutions, Meyer Werft Papenburg, Royal Caribbean Cruise Line, RWTH Aachen University, SOLIDPower S.p.A., Delft University of Technology, Lund University, VTT Technical Research Centre of Finland, SOLIDPower SA, Alma Clean Power, Wärtsilä, Bureau Veritas Marine & Offshore, MSC, BALance Technology Consulting, and IFEU.

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



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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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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



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NAUTILUS



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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, 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

Who should join:

- OEMs of Fuel Cells, Electrolysers & Storage Systems
- Marine Fuel Suppliers
- Marine Genset Manufacturers
- Ship Yards, Ship Owners & Ship Operators
- Marine Safety & Classification Organisations
- Regulators, Consultants
- R&D specialists in the related fields

Registration

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SOFC Drivetrain Breakout Session

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NAUTILUS



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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:

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