



LH2 SHIPPING

ENABLING ZERO EMISSION SEA TRANSPORT

Hjelmeland, Norway



The Starting Point

Worlds first LH₂ fuelled ship:

- Zero emission operations since March 2023
- DNV-certified ship technology
- 400 kW PEMFC
- 4t LH₂ storage
- Re-fuelling 3t/hr
- M/F Hydra (Norled AS)*

** LH2 Shipping personnel acted as Project manager at Norled AS*

In operation



Photo: LH2 Shipping AS



M/F Hydra – The Bunkering System

The first maritime LH₂ supply chain and bunkering system in operation.

- Meets regulatory requirements
- Certified and safe operations
- Effective, 3 tons/hr bunkering rate
- Limited safe working zones, 25m

Utilising in-house supply chain experience from LNG projects and M/F Hydra, to new LH₂ supply chain projects.

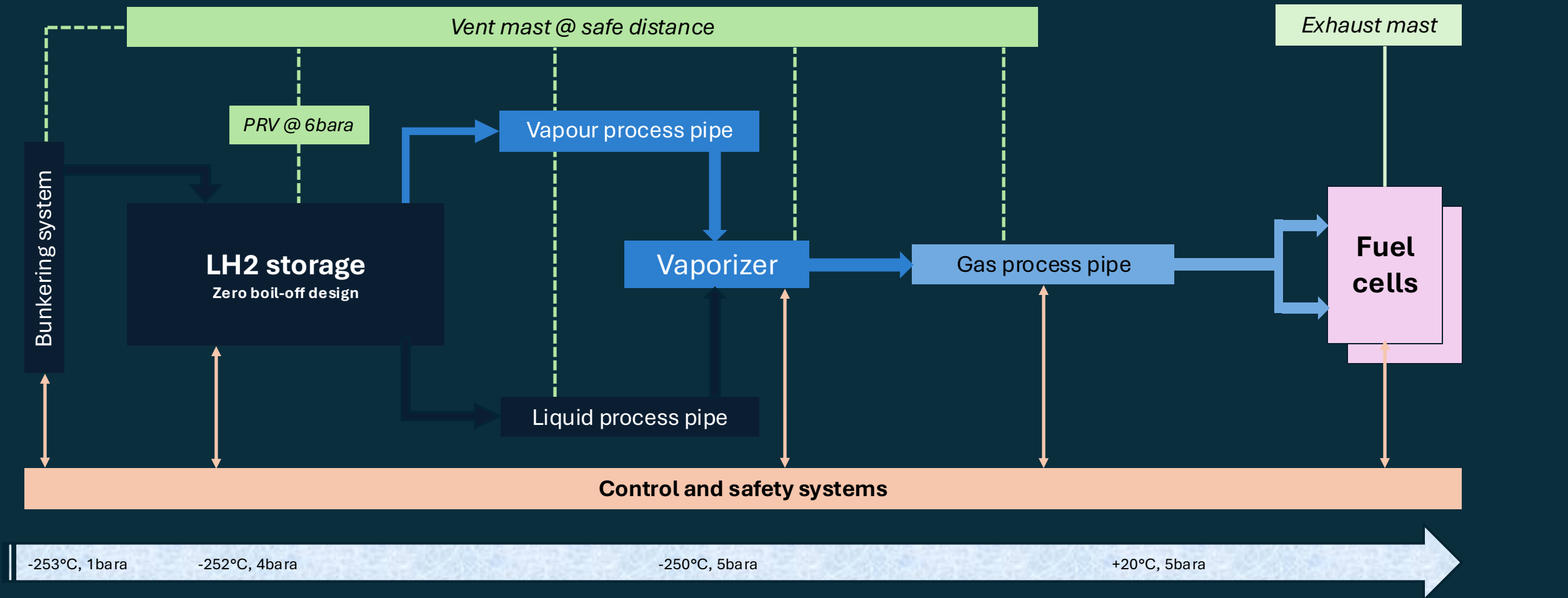


Photo: LH2 Shipping AS

Experience transfer and scalability

1. Proven and safe (DNV certified technology)
2. Applicable to a range of ship types in shortsea trade
3. Offers range and flexibility

The LH₂ Value Chain – onboard ship



Project Portfolio

Through our project portfolio
we both establish industry insight
and help create the market .

NEXT STEPS – VESSEL TYPES THAT CAN OPERATE ON THE SAME SYSTEM AS M/F HYDRA

Project Portfolio

Shortsea cargo ships	Ro-pax & ro-ro ferries	Cruise & Yacht	Offshore wind vessels	LH ₂ bunkering systems
			Not started	
Europe	Europe and US	World-wide	Europe and US	European ports

Shortsea container vessels	High-speed passenger vessels	LH ₂ feeder vessels	Seafood vessels (LH ₂ & GH ₂)	Platform supply vessels
				
Europe	Europe and US	Europe	Norwegian coast	North Sea

Container Vessels

In construction

Samskip Sea Shuttle container ships:

- LOA / TEU: 138m / 800
- LH2 / PEMFC: 17 ton / 3,2 MW
- 2 container ships in construction
- Zero emission operations
- Sailing Oslo ↔ Rotterdam from Q4 2026



General Cargo Vessels

A cooperation between LH2 Shipping, LMG Marin and Grieg Shipbrokers.

The aim
To develop and build zero-emission, safe and cost-efficient cargo vessels to operate in the North Sea.

ENOVA soft funding granted for two pcs. 5000 dwt bulk carriers on LH₂: ~10 mEUR per vessel.
Investment decision within June 2026.

Length Over All (LOA)	96.8m
Length Between Perpendiculars (LBP)	95.0m
Moulded Depth	7.8m
Beam	16.0m
Fully Loaded Draught	6.0m
Air Draft	38.0m
Deadweight (DWT)	5,000t
Hold Capacity	c. 7,500m ³
Lay Down Area Cargo	c. 800m ²
Suction Sail FWD	18m x 4m



Photo: LH2 Shipping / Grieg Shipbrokers



LH₂ Feeder Vessels

A cooperation between LH2 Shipping and LMG Marin.

The aim

To develop and build zero-emission, LH₂ feeder vessels for ship-to-ship transfer to large ship consumers (cruise, PSV, cargo ships) in the North Sea.

Commercial

Transport LH₂ from production location on time charter with LH₂ suppliers (Gen2 Energy in Mosjøen, Norway, and others).



Photo: LMG Marin / LH2 Shipping

An aerial photograph of the ocean with white-capped waves breaking against a dark, rocky coastline on the left. The water is a deep teal color, and the foam is bright white.

THANK YOU.



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