



Ammonia (NH₃)

Cargo handling systems and
fuel systems for NH₃ carriers
and -bunker vessels



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AMMONIA FUEL SYSTEMS

will play a strong role in the decarbonisation of shipping



SAFE HANDLING OF AMMONIA

Decades of experience with the transport of Ammonia. Highly sophisticated control and safety systems.



SATISFIED CLIENTS

Mature reliquefaction system designs for ammonia.



COOPERATION WITH THE PIONEERS IN THE FIELD

Working at the technological frontier with innovative shipowners, designers, classification societies and other industry partners.

AMMONIA GAS CARRIERS

Cargo Handling System – safe transport of ammonia for people and the environment



EXPERIENCED CONTRACTOR

- With more than 160 ammonia capable gas carriers delivered.
- Expertise from numerous bunker vessel projects.



MARKET LEADER

In the semi-ref LPG/NH₃ carrier market.



TRUSTED PARTNER

For the transport of cryogenic and toxic gases such as ammonia since 1980.



SATISFIED CLIENTS

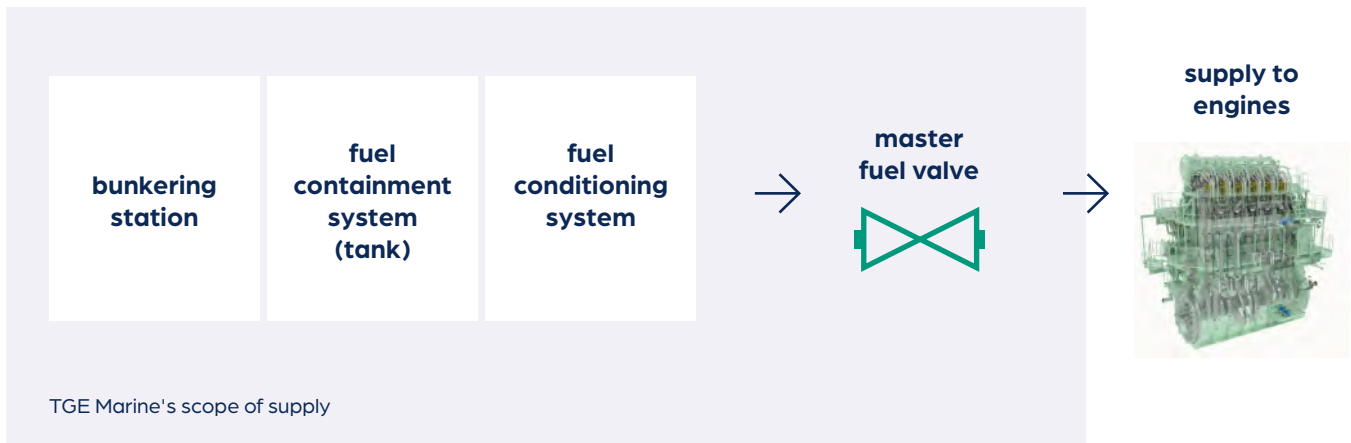
Around the globe.

Ammonia (NH₃) Fuel Systems

We will provide modularised NH₃ fuel systems for high volume markets and all kind of vessels such as Ammonia carriers and PCTCs as well as tailor made solutions for special applications designed in close cooperation with our customers.

NH₃ main engines, auxiliary engines and boilers

- bunkering stations
- containment systems
- fuel conditioning systems
- reliquefaction systems
- auxiliary systems



Key References of Ammonia as fuel include



8 x 9,100 PCTC

- **Owner** Höegh Autoliners AS, Norway
- **Yard** China Merchants Heavy Industry (Jiangsu) Co. LTD, China
- **Classification** DNV
- **Completion** 2024–2026
- **Scope** High pressure fuel gas system for a 2–stroke main engine and low–pressure fuel gas system for 4–stroke auxiliary engines, 1 x 3,400 m³ bilobe fuel gas tank (type C) and TGE Marine recondenser for sustainable BOG management.
- **Highlight** The eight multi–gas tanks, granted DNV's ammonia– and methanol–ready notations, are the first in the PCTS segment that can be converted to zero–carbon ammonia. The AURORA Class will be world's largest PCTC vessels

Key References of Ammonia as cargo include



9x 12,000 cbm LEG/LPG/Ammonia/ VCM carrier

- **Owner** Eletson, Greece
- **Yard** Hyundai Mipo Dockyard, Korea
- **Classification** LRS
- **Completion** 2015–2018
- **Scope** Engineering Procurement and Construction-Supervision (EPCS) contract, cargo handling system and cargo tanks



4x 35,000 cbm LEG/LPG/Ammonia carrier

- **Owner** Navigator Gas, UK
- **Yard** Jiangnan Shipyard Group, China
- **Classification** ABS
- **Completion** 2016–2017
- **Scope** Engineering Procurement and Construction–Supervision (EPCS) contract, gas handling system including cargo tanks and LNG fuel gas systems for ME-GI engine and LNG fuel tanks
- **Highlight** The world’s largest Ethylene/Ethane carrier of 37,000 cbm capacity



2 x 4,700 cbm LEG/LPG-Carriers

- **Owner** Anthony Veder Group, The Netherlands
- **Yard** Dingheng Shipyard, China
- **Classification** BV
- **Completion** 2014
- **Scope** Engineering Procurement and Construction-Supervision (EPCS) contract, cargo handling system



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