TGE MARINE

Ammonia (NH₃)

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

powered by Ammonia

FGS | NH₃ | Gas Carrier | Bunker Vessel | Floating Unit | CO₂

Ammonia (NH$_3$)

**Cargo handling systems and fuel systems
for NH$_3$ carriers and –bunker vessels**

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/NH$_3$ carrier market.

✓ TRUSTED PARTNER

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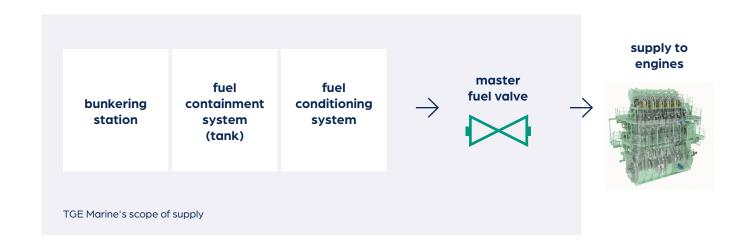gases such as ammonia since 1980.

✓ 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

| bunkering station | fuel containment system (tank) | fuel conditioning system | → | master fuel valve | → | supply to engines |

TGE Marine's scope of supply

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 auxilary 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 con–verted 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

TGE MARINE

Headquarters

TGE Marine Gas Engineering GmbH

Mildred–Scheel–Str. 1
53175 Bonn
Germany

Phone	+49 228 50218–0
Service Hotline	+49 228 50218–247

Mail	info@tge–marine.com
Sales	sales@tge–marine.com
Purchase	procurement@tge–marine.com
After Sales	aftersales@tge–marine.com
Service	serviceline@tge–marine.com

www.tge–marine.com
www.linkedin.com/company/tge–marine

Branch office

TGE Marine Gas Engineering Technology (Shanghai) Co. Ltd.

Crystal Tower
11th floor, Room 01–1
No. 68 Yuyuan Road
200040 Jing'an District, Shanghai
P.R. China

Phone	+86 21 6886–2091
Mail	shanghai@tge–marine.com