



SAIPEM LOW CARBON AMMONIA SOLUTIONS - INTRO

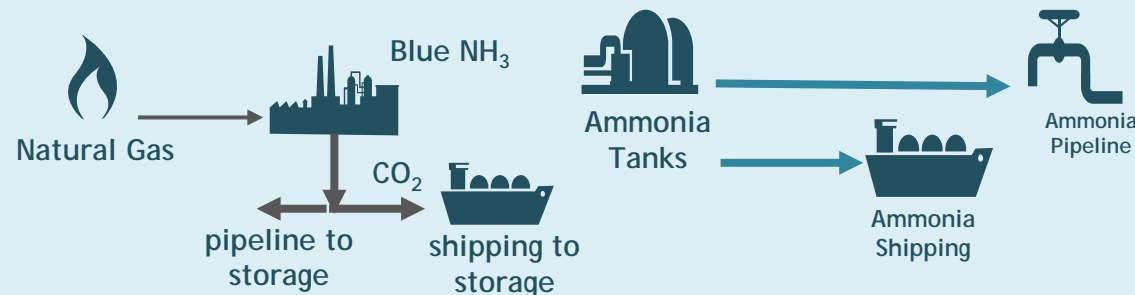
SAIPEM GAS MONETIZATION SOLUTIONS

Our value proposition for clean energy hubs

Gas to Clean Fuel

Gas import and CO₂ export to storage:

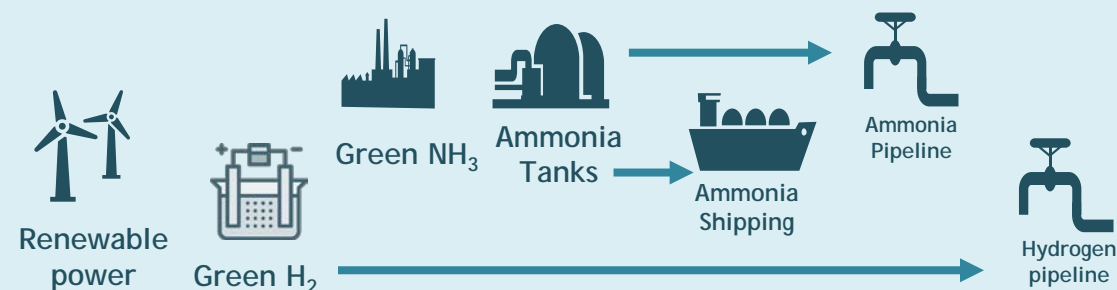
- Clean Ammonia production
- Ammonia storage
- Export of liquid ammonia
- Possible GBS solution



Power to Clean Fuel

Clean Power Import:

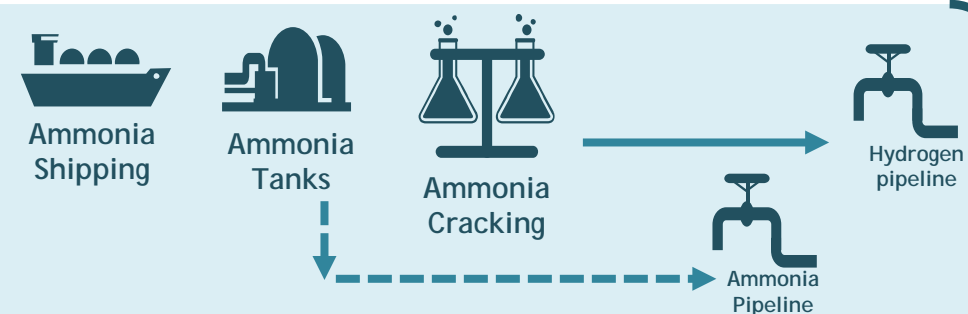
- Clean Ammonia production
- Ammonia storage
- Export of liquid ammonia/gaseous hydrogen
- Possible GBS solution



NH₃ Cracking

Clean Ammonia import by ship:

- Ammonia storage
- Export of clean hydrogen obtained by ammonia cracking
- Potential export of liquid ammonia
- Possible GBS solution



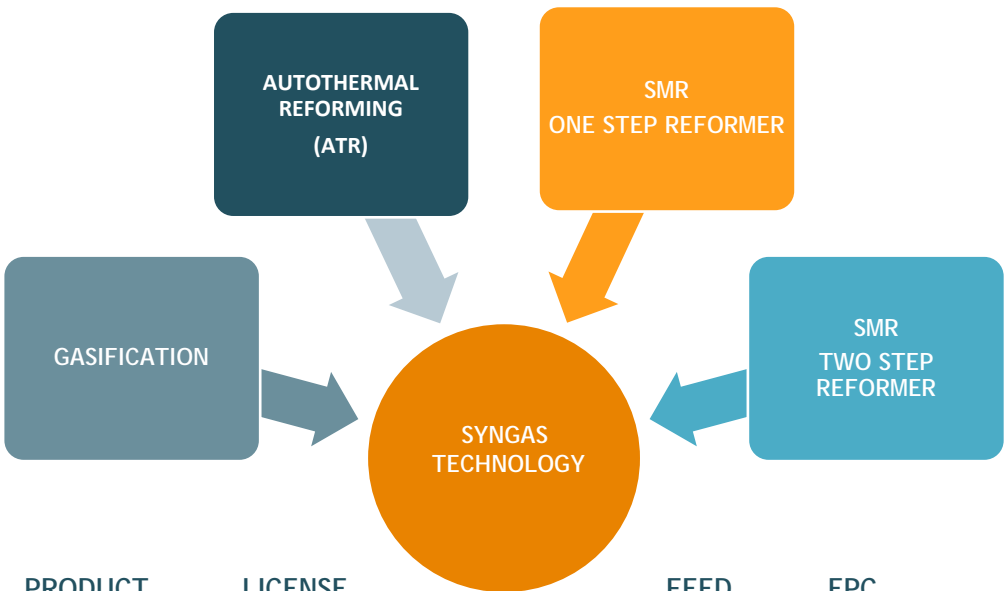
SAIPEM GAS MONETIZATION SOLUTIONS

Bringing 60+ years of unparalleled syngas expertise

THE WORLD LARGEST AMMONIA PROJECT ON A SINGLE SITE
- QAFCO 5 PROJECT



SYNGAS GENERATION COMPLEX (2X387 MMSCFD H2 CAPACITY)
- GTL FACILITIES IN ESCRAVOS, NIGERIA



PRODUCT	LICENSE	FEED	EPC
HYDROGEN	HTAS/TP/FW/KT/Others	11	23
AMMONIA	HTAS/ Others	5	27
METHANOL	HTAS /ICI/Others	5	9
IGCC	GE (Texaco)/SHELL	1	6
GTL (FT)	HTAS SASOL-CHEVRON	2	1
TOTAL			90

60+ YEARS OF EXPERIENCE WITH 90 PLANTS IN HYDROGEN, AMMONIA, METHANOL AND SYNGAS PRODUCTION

PROVEN EXPERTISE IN MASTERING THE AMMONIA VALUE CHAIN

Our flagship EPC projects

For more than 60 years, Saipem has accompanied the growth of the ammonia industry achieving significant milestones in terms of capacity, energy consumption and plant reliability with **smart integration** of the ammonia unit with urea and utilities.

OMIFCO

- **Fast-track** approach with 35 months EPC schedule
- Grass-root facility including all required utilities and off-sites
- Current production **>4,000 MTPD**



QAFCO V

- The **largest fertilizer complex** ever built
- Current production **>4,600 MTPD**
- 2x50,000 MT ammonia storage capacity and >5 km interconnecting ammonia pipelines

DANGOTE

- A complete **grass-root** facility designed for **black start**
- Extensive site preparation required
- Design capacity **4,400 MTPD**



PERDAMAN

- The **largest ammonia** plant on single converter (**3,507 MTPD**)
- The first ammonia plant with Topsoe SYNCOR™ technology
- **Modular construction** approach

PROVEN EXPERTISE IN MASTERING THE AMMONIA VALUE CHAIN

References in ammonia storage

Saipem offers the full ammonia value chain, from production to distribution.

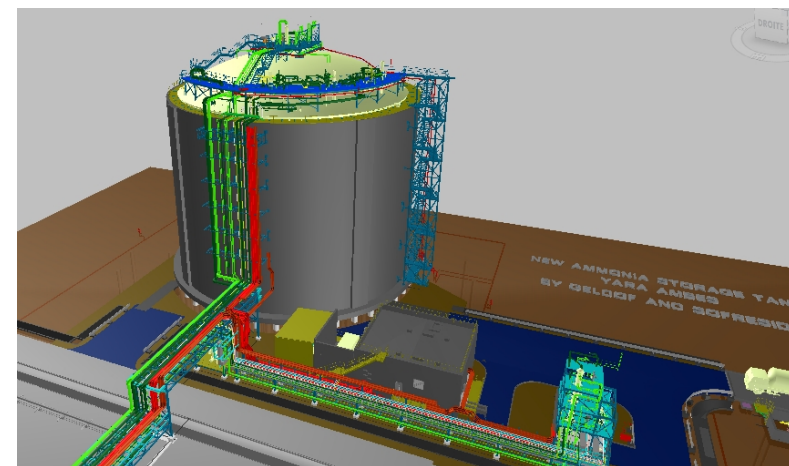
- **In-house engineering** capability to independently design and build ammonia storage tanks
- **40+ years** experience in the design and construction of LNG storage tanks worldwide



2019 Yara - Tertre, Belgium

1 x New ammonia double containment tank (NH₃), 15000 t @ -33°C (22000 m³)

Saipem SOW : Feed + EPCm



2018 Yara - Ambes, France

1 x New ammonia double containment tank (NH₃), 25000 t @ -33°C (37000 m³)

Saipem SOW : Feed + EPCm

UNIQUELY STRONG TIES WITH TOPSOE

A distinctive advantage

Saipem has a long-lasting and active relation with Topsoe, built over 50 years of successful project execution, leading to:

- In-depth knowledge of Topsoe (formerly owned by Saipem) ammonia technology peculiarities Extensive proven experience in integrating and optimizing Topsoe ammonia plants with utilities and offsites.
- Large-scale ATR experience since 2005 (Escravos, ~2x6,000 MTPD equivalent Ammonia)
- Extensive database of large-scale ammonia plants designed and built offers our customers the benefit of reduced estimating risk
- Superior knowledge of Topsoe Syncor™ /ATR technology acquired through multiple projects. Some selected examples are:
 - 3,507 MTPD Ammonia, EPC (ongoing)
 - 3,000 MTPD Blue Ammonia, Pre-FEED (ongoing)
 - 2x3,500 MTPD Blue Ammonia, Concept Study (ongoing)
 - 210 kTA Blue Hydrogen, Pre-FEED (completed 2022)
 - 7,650 MTPD Methanol, FEED+EPC Tender (completed 2021)
 - 10,000 MTPD Methanol, FEED+OBE (completed 2008)



