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BLUE FORUM

Imodco

Terminals for sustainable alternative energies carriers: Developments ahead

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Imodco Terminals & Services

"The World needs sustainable energy as our population is continuously growing. Our Mission is to provide jetty-less fluid transfer solutions in the whole energy value chain".

Expertise | Services | innovation

60 years of experience

- EPCI of CALM Terminals
- Aftersales on CALM Terminals
- Aftersales on Turrets & other Mooring Systems

60 countries

- 459 CALM Systems Delivered
- 255 CALM Systems in Operation
- 50 Turrets & other Mooring Systems in Operation

24/7 Assistance

- 90 dedicated employees
- Worldwide presence
- Project conception to lifetime support

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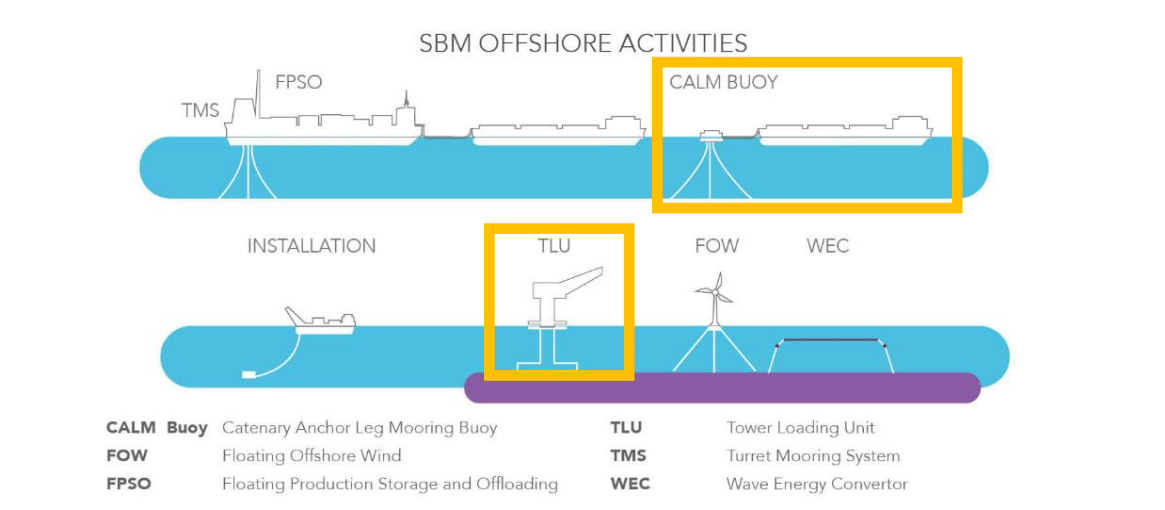
Introduction of Imodco Company

Imodco, An SBM Offshore Company.

Imodco is the Marine Terminals product line of SBM Offshore.



0.06
TOTAL RECORDABLE INJURY FREQUENCY RATE (per 200,000 hours)

6,426
PEOPLE

7
EPCI projects currently under execution

15
Floating units currently in operation

99%
Oil production uptime

>50
Floating production systems executed and delivered

>350
Cumulative years of operating experience

2 million
Tonnes per year of CO_2 captured and reinjected

US$ 29.5 b
Record Backlog half 2021

US$ 8.7 b
Net cash from L&O in 2020

60%
R&D investments dedicated to non-carbon technologies

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Introduction of Imodco Company

Our Past

IMODCO

SBM OFFSHORE

ATLANTIA

SBM Atlantia

SBM OFFSHORE SYSTEMS

SBM PRODUCTION CONTRACTORS

IHC|CALAND

SBM IMODCO

Today

SBM OFFSHORE

Imodco

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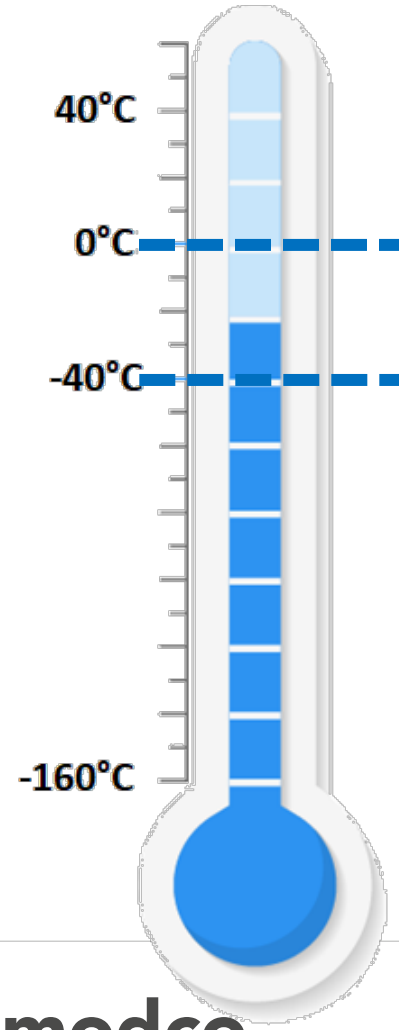
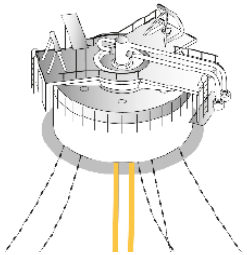
From buoy to tower – depending on Pressure & Temperature





CALM TERMINALS FOR CONVENTIONAL PRODUCTS

Crude Oil / Refined products / Slurry / LPG / Electricity / Ammonia* (subject to project conditions) …

TLU FOR COLD PRESSURIZED PRODUCTS

CO2 injection / LNG / Compressed H2 Ammonia* (subject to project conditions) /…

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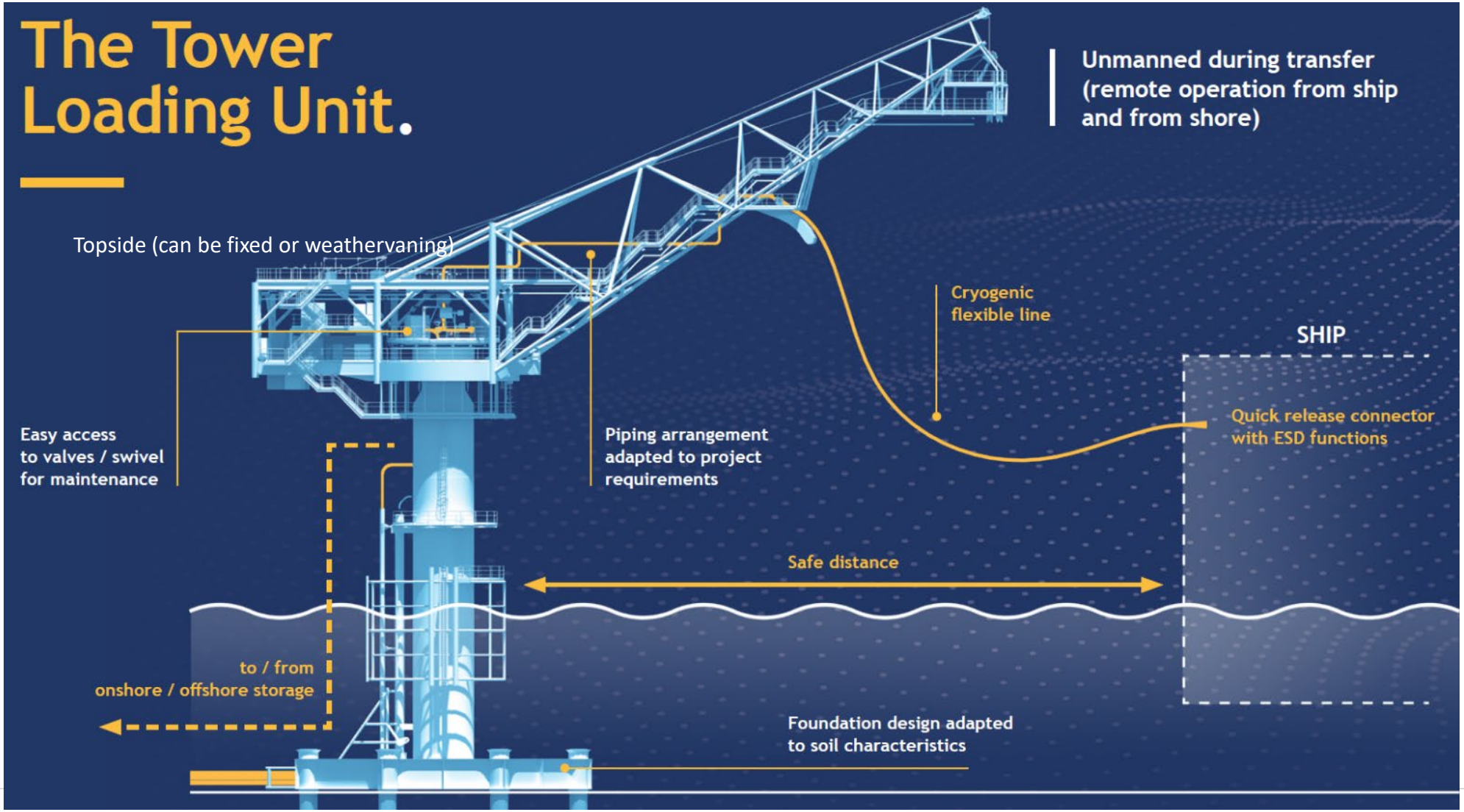
Why using a tower ? From Feasibility to Safety (depending on application)



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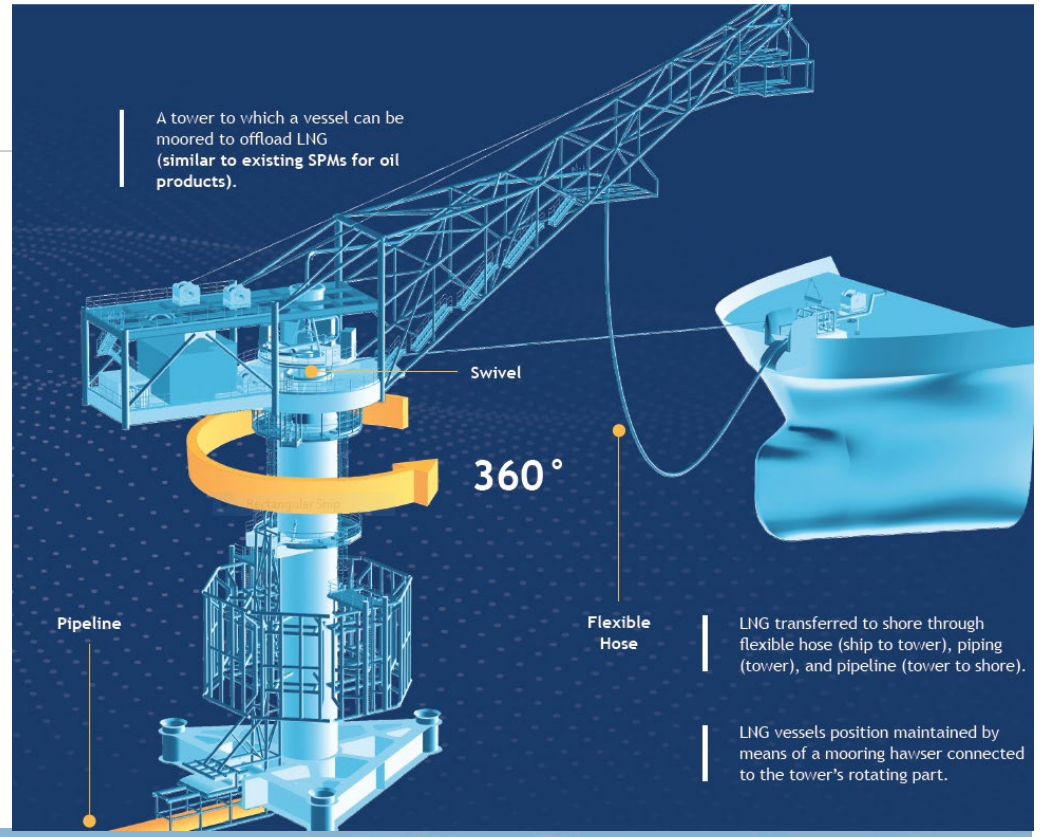
Tower Loading Unit (TLU)

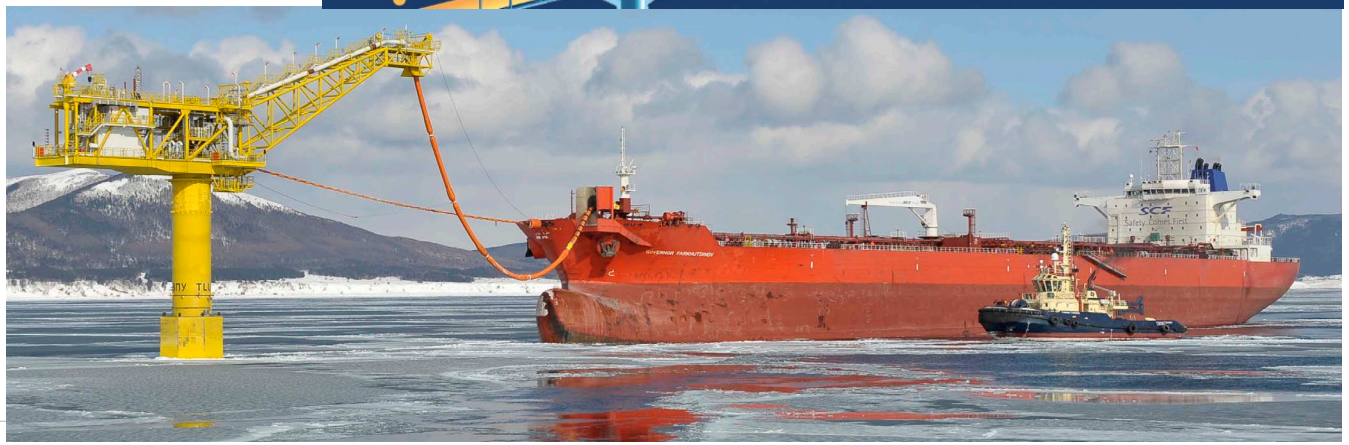
The Tower Loading Unit (TLU), a Single Point Mooring (SPM) system for CHALLENGING PROJECTS:

- already in use for offloading in **ice conditions**

- further developed for **LNG transfer** application
  - suitable for low temperature (e.g. LNG @ ~160 deg C)
  - suitable for **very shallow water depths** (e.g. 10 m for ssLNG carrier)

- Also adapted to **High Pressure** applications (e.g. compressed H2)
- suitable for operations in **harsh environment** (e.g. North Sea conditions)
- **Operations remotely controlled** from carriers – no need for external support
- **Hoisting CO2 injection pumping system**
- Its aerial jumper enabling WYSIWYG for higher safety for daily operations





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Remote method to connect product loading hose without the use of line boat/tug

TLU allows connection without use of line boat (tug depends on carrier capabilities)

carrier final approach for mooring hawser pick-up

No need for workboat, No need for personnel on TLU (remotely controlled winches)

Loading boom rotation under mooring hawser tension

Hose connection

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SPM Terminals for Ammonia

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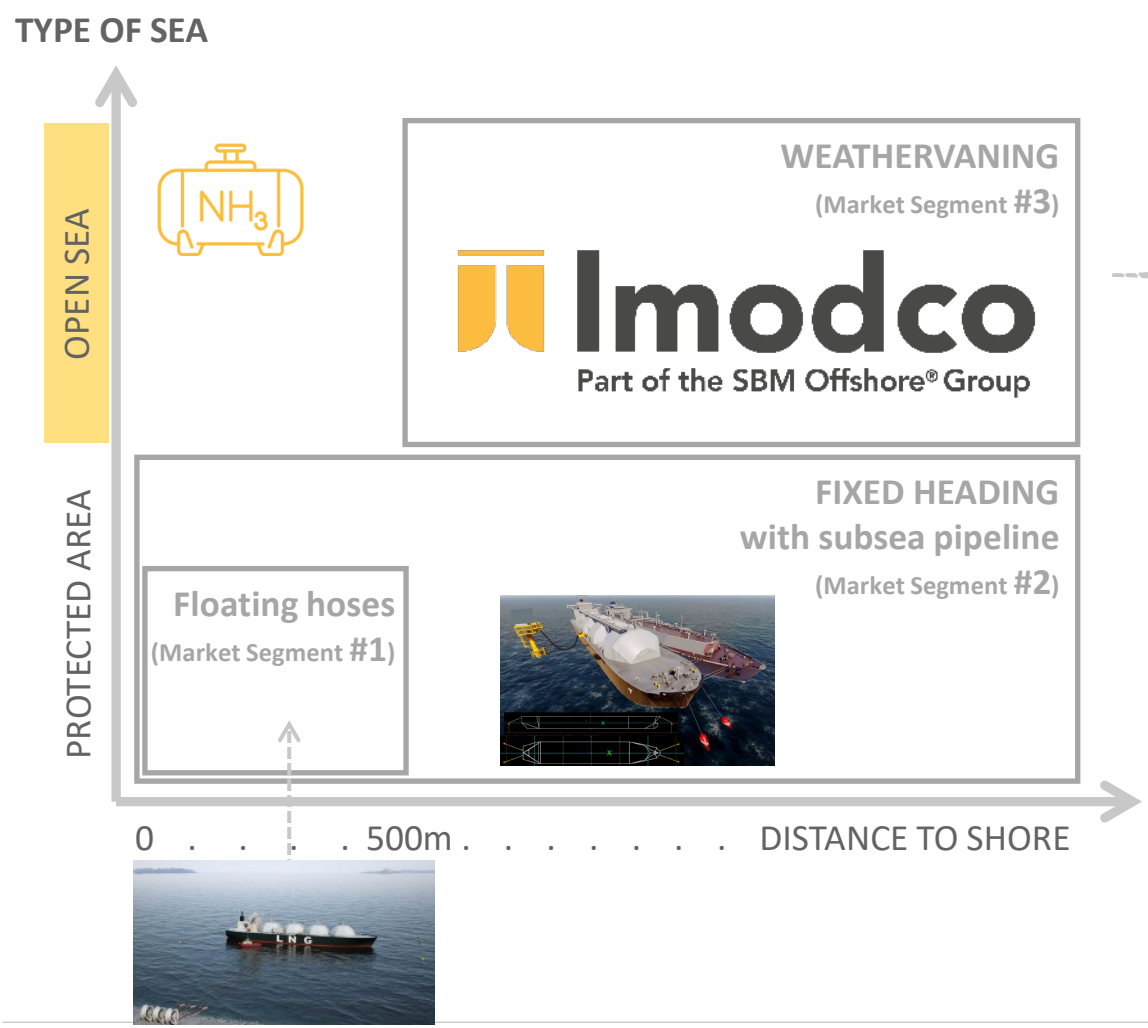
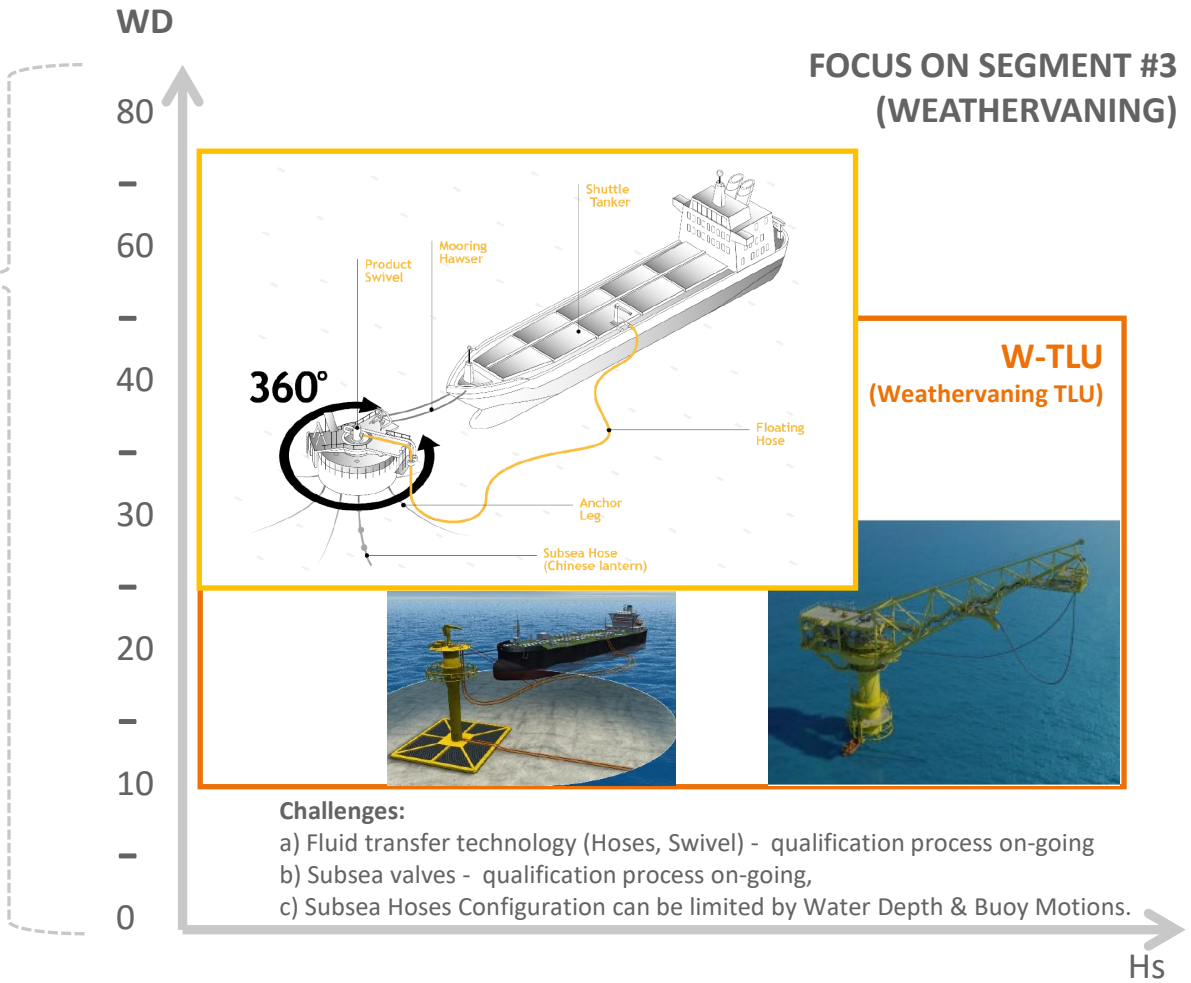
Jetty-less Terminals for Ammonia – Technical Segmentation





Challenges:

a) Fluid transfer technology (Hoses, Swivel) - qualification process on-going

b) Subsea valves - qualification process on-going,

c) Subsea Hoses Configuration can be limited by Water Depth & Buoy Motions.

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NH3 Buoy development

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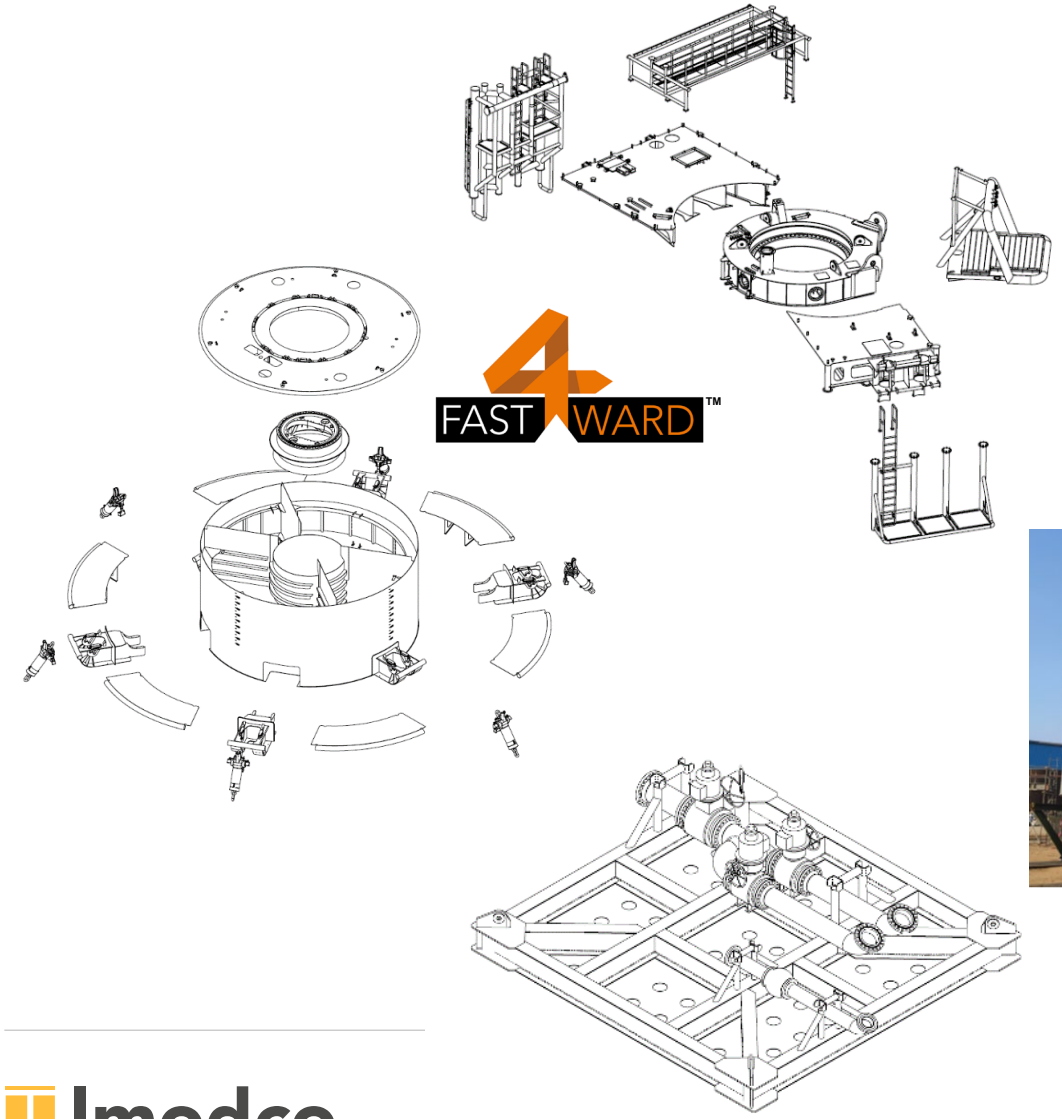
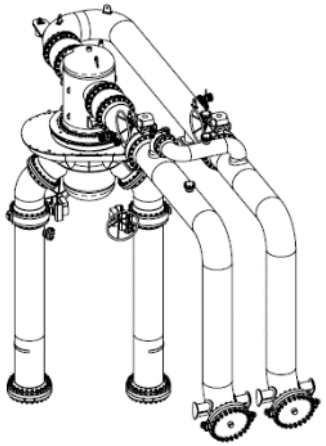
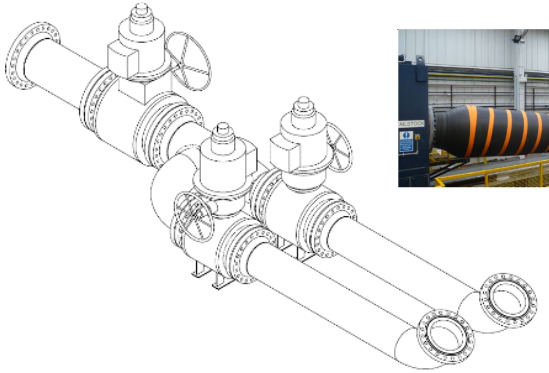
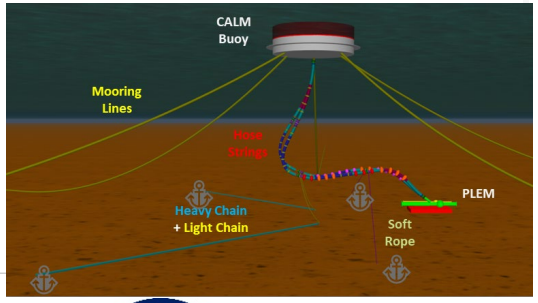
NH3 Buoy and F4W



NH3







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