

### for PETROLEUM INDUSTRY

ATEC, a Limited Liability Company based in Milan, Italy, provides engineering services and turn key solutions for the Oil & Gas Industry since 1978.







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# ATEC provides engineering services and solutions for Oil & Gas Off-Site facilities

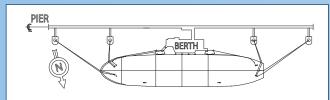
Off shore Terminals (CBM / SBM / SPM / FPSO), Marine Terminals and Storage plants

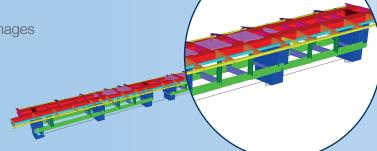


Tum-key solution with off-loading facilities designed and manufactured by ATEC, certified by RINA

Design activities and consultancy services for marine terminals including:

- Feasibility study, preliminary/basic/FEED with civil, mechanical, electrical design and automation
- Traffic study with GPSS method
- Site surveys, above water and underwater inspection and NDT on steel and concrete structures
- Structural verification with FEM analysis to define structures bearing capacity
- Dynamic analysis of mooring forces
- Compatibility study for structures/plants change of use
- Master planning of maintenance and upgrading programs
- Assessment of Marine Terminal residual life
- Harbour engineering and environmental studies
- Technical assistance to recover from accidents/damages





FEM analysis

Dynamic mooring analysis



Underwater activities





Master planning

Sea water intake













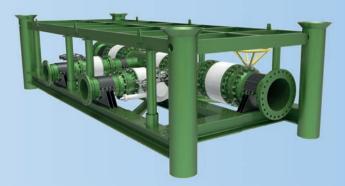
# Equipment for Marine Terminals

- Loading facilities (MLA, Hose Towers)
- PLEM for subsea application
- Safety devices (ERS, HBU)
- Berthing and Mooring Systems
- Operator Shelters
- Control systems
- Marine Weather Stations



Marine Loading Arms

Off shore structures



PLEM hydraulically operated



Loading facilities

Subsea manifold with swivel joints



Operator shelter with monitoring systems



Construction supervision













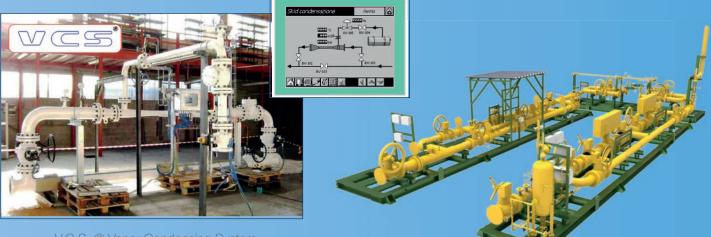
## System Integration

Fully integrated system packages based on high technology instrumentation and automation.

#### Systems for LPG/LNG



G.O.L.H. ® Gas On Line Heating system suitable for cryogenic LPG heating by sea water.



suitable for gas phase condensing during tanks loading



GOLH ® and VCS ® are ATEC Registered Trade Marks













## Analyzer System Packages

Process and Environmental applications including Mass Spectrometers, Gaschromatographs, Continuous Analyzers, Physical Properties Analyzers, CEMS, Water Analyzers etc.





Analyzer Shelters



HVAC for hazardous area with redundant pressurizing system



Sample Conditioning System



Analyzer Shelter inside view















## Product Handling Systems



Truck loading bays with Vapor Recovery Unit



Dosing Units



Odorizing and Fiscal Marking Unit



Filtering System

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