



# Integrated Tank Services

## At the Heart of the Liquid Bulk Supply Chain

Tank storage facilities play a vital role as import/export distribution terminals or industrial and hub terminals. For tank terminal operators, it is critical that facilities are kept operationally safe and at the same time eliminate potential environmental impact.

We provide key support services to achieve these objectives by including smart inspection technologies, and innovative cleaning concepts, plus emissions reduction management programs. These services offer the highest levels of worry-free performance and control.





# Involvement In Tank Terminals

At Intero, our latest innovations keep us ahead of the curve in the robotic inspection of storage tanks while they remain in-service. We also take care of the inspection of large or small diameter terminals featuring complex geometries plus difficult-to-access pipelines. Our advanced capabilities ensure that operators are provided with high-quality integrity data to enable informed decision-making as well as proven emission reduction programs to ensure that you can operate your tank farm responsibly and sustainably.

## Our Tank Inspection Services

- Purging and drying
- Cleaning and flushing
- Cooling and heating
- Leak and pressure testing
- Project management
- Support services
- Inspection services
- Emission reduction
- Energy savings

Our services are executed during new construction, commissioning, operations and maintenance or during decommissioning phase.



# Intero's Key Services

Minimizing risk using a cost-efficient approach

## Risk Management

- Tank Explorer – online tank floor inspection system
- Online bottom settlement assessment
- In-service corner weld assessment
- In-service visual assessment
- EVA - Extreme Value Analysis
- Ultrasonic, free-swimming Pipeline Inspection (in-line inspection)
- MFL robotic in-line Inspection
- Corrosion growth and remaining life assessments
- PRIMIS® - Pipeline Risk and Integrity Management Solution
- Emission reduction and management programs

## Field Surveys

- Corrosion – coating and cathodic protection
- Third party activity and interference
- Leak detection – sniffer dogs and detection of illegal tapping
- Localization XYZ – right of way, depth of cover

## Pipeline Cleaning

- Pipeline pigging
- Purging and drying (nitrogen)
- Chemical cleaning

## Emissions

- LDAR - Leak Detection and Repair
- Methane accounting program
- SFEMP emission management software
- Environmental program development
- Training and competence development
- Benchmarking emission performance
- Vent and flare loss monitoring
- Thermographic surveys

## Project Management

- Engineering and preparation
- Planning, logistics, and transport
- Site project management
- Reporting
- Maintenance planning and preventive maintenance optimization

## Support Services

- Bolting
- Pig tracking
- Product sampling and testing
- Innovation and development





# Our Inspection Solutions Keep Your Tank In Service

## Tank Storage Challenges

Tanks are designed and manufactured in various ways, but the objective is always the same – the safe storage of often hazardous and toxic products. To maintain an efficient, clean, and safe environment; cleaning, maintenance, and inspection of storage tanks and terminal pipelines is crucial. This ensures protection of the products in each tank. Because the tanks and products always pose different challenges, custom-made integrity management solutions are essential.

Intero is your innovative, global service provider. We work with you and for you – delivering the latest technologies to help ensure the safest and most appropriate solutions. We aim to help tank terminal owners and operators optimize asset space efficiently, use natural resources responsibly, and constantly maximize safety.

## In-Service Maintenance

During the operational lifetime of a tank terminal, the main challenge is to ensure safe, environmentally-sound, and efficient operation of storage tanks and terminal pipelines. Regular inspections (often driven by regulations) are a key part of a strategy that will ensure long-term integrity.

Critical structures like tank bottoms can be susceptible to metal loss and leakage. They therefore require careful monitoring. Inspection of inter-terminal transport and (un)loading lines is also highly important to prevent degradation like corrosion.

## New Storage Tanks – Construction And Commissioning

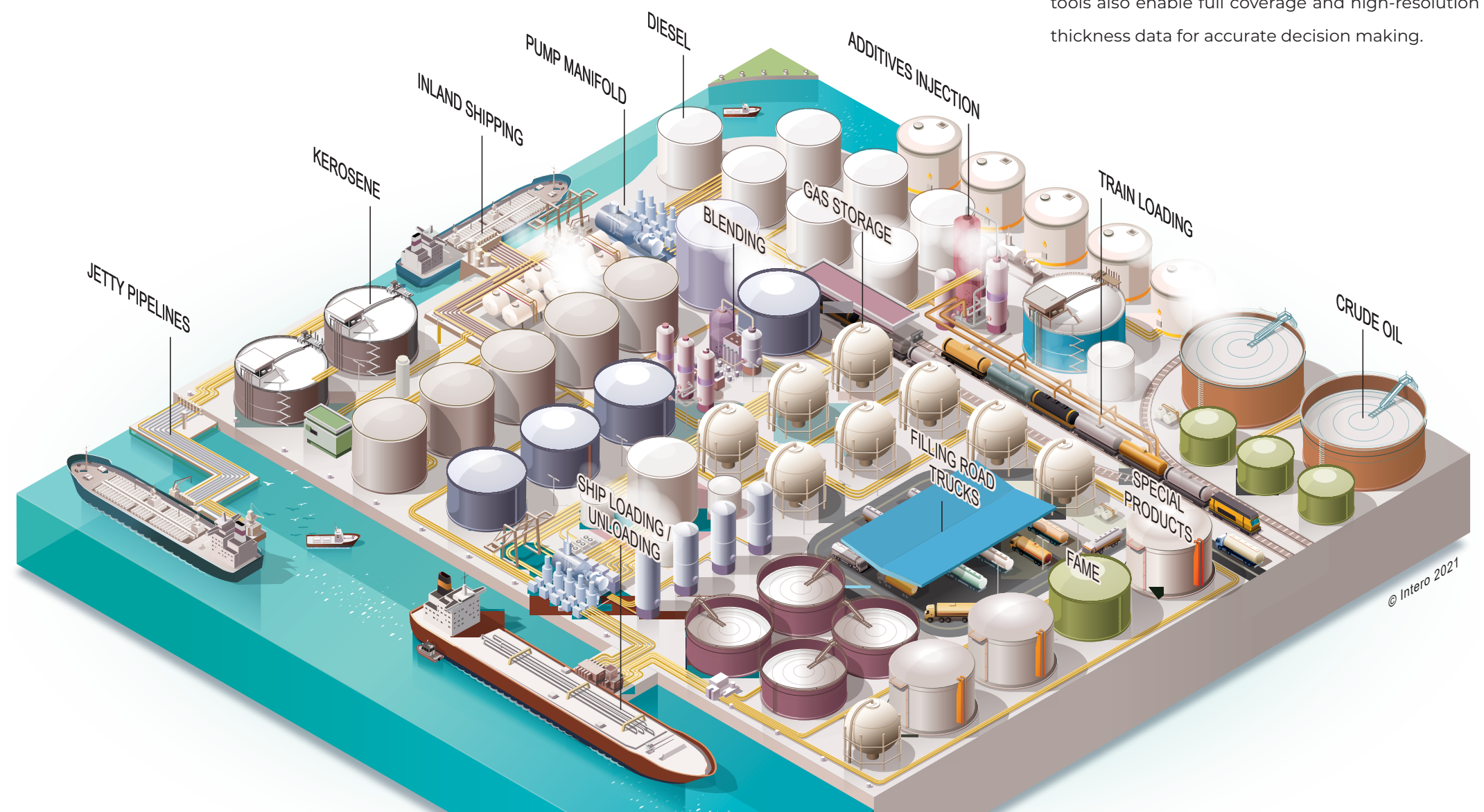
To effectively get a storage tank farm into service, you need to eliminate risks, ensure safety, nullify environmental impact, and avoid potential future issues such as leaks. This is why testing and cleaning are so crucial in the commissioning phase of a tank terminal. Intero's specialists take care of all aspects of chemical cleaning, pigging, and pipeline flushing and combine them with professional project management support to ensure a safe and flawless start-up. As part of this commitment, Intero has developed innovative and environmentally friendly, GREEN chemical cleaning methods to eliminate waste streams.

## Solutions To Support You

To support terminal operators in maximizing their asset availability while ensuring safety, Intero has developed a range of intelligent and innovative inspection solutions.

Traditionally, storage tanks have been taken out of service for inspections like tank bottom corrosion assessments and bottom settlement inspections. Intero's testing during operation concept (or non-person entry) means there is no longer any need to empty the tank or take it out of service. With this method, you can significantly reduce the costs and frequency of in-service inspections as well as the effects of downtime, while cleaning costs and (off-spec) product waste are reduced.

Intero operates a suite of innovative (robotic) tank inspection solutions that can be deployed while the tank stays in operation. These can help with maintenance strategies and planning for future decades. As a result, future inspections for degradation like corrosion can be carried out before and during scheduled maintenance. Intero operates a range of flexible ultrasonic pipeline inspection tools (pigs) plus MFL inspection robots to cope with complex geometries, small and large diameters, as well as short and long distances. Turnkey solutions can also be developed that can be mobilized on short notice for cleaning and inspecting even the most challenging pipelines, ensuring that they can be handed back to operations in the fastest possible time. Intero inspection tools also enable full coverage and high-resolution wall thickness data for accurate decision making.



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## **Intero Integrity Services**

[sales@intero-integrity.com](mailto:sales@intero-integrity.com)

[intero-integrity.com](http://intero-integrity.com)

## **Elevating the Standard for Tank Services**

Intero Integrity Services is the leading specialist for keeping complex oil, gas, and petrochemical facilities clean, safe, well-maintained, and highly productive. Our unique range of industrial, inspection, and environmental services maximizes your asset availability.

Turnkey. Innovative. Optimized. We listen to customers constantly, so we understand what's important to them: the highest possible performance, protection, and predictability.

## **Ever-evolving solutions**

