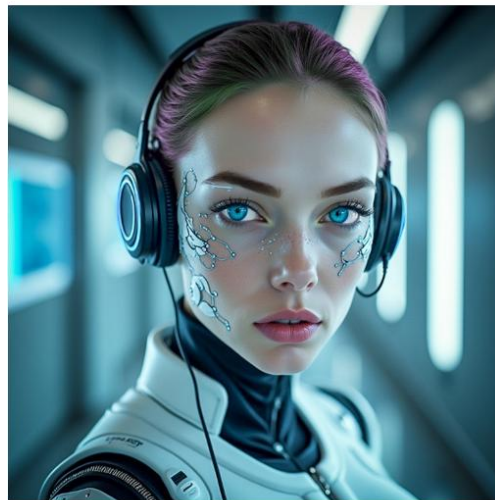


2026 Oil Loss prevention for Traders, Stock Control Specialists, Logistics and Shipping Operators



What is new?

Cassandra



'Only those systems that use
optimal information can function.
Let me test yours'

TTT funded the development of an Artificial Intelligence named 'Cassandra'. Based on The General Law of Functionality, Cassandra can detect knowledge gaps and test and predict HSEQ Performance and Operational Excellence. She acts as an Early Warning System preventing risk. This is a unique service only offered by us.

Workshop Overview

Commodities such as crude oil and bulk liquid products are subject to sensitive commercial transactions with price being determined on quantity and quality. Such demanding trading environments require swift resolution to any disputes but many claims either remain unresolved or are the subject of lengthy and costly litigation.

It would seem to have become a way-of life to accept a level of losses when buying and o selling from/into certain Oil Terminals throughout the world. However, once the sources of losses have been predetermined and highlighted to the parties in a contract, action can be taken i.e. either rectification or adjustment in pricing. Once a contract has been entered into then it is only when direct intervention occurs (i.e. controlling losses up front) from an experienced third party at a point or points of the Custody Transfer that these losses can be prevented.

This one day workshop is designed to provide a brief overview of the major activities performed in the Custody Transfer and the common mistakes made by looking into historical Case Studies of loss scenarios and the action that was taken on the ground on behalf of Traders. For example it looks into the problems associated with Oil Terminals without a “Line fullness policy”, a Shore Tank and pipeline Integrity Inspection program and/or a shore tank or meter calibration verification plan; which leave themselves open to quantity/quality claims. It looks at the problems associated with vessel measurement and the Vessel Experience factor when occasionally Bills of Lading are based on ships measurements.

Traders and Operators who are either unaware of the handling issues surrounding the various crudes and products and the problems associated with losses in certain terminals and vessels, or fail to pass on definitive instructions to their Inspectors, will suffer in the long run. This workshop starts the process of putting this right and addresses many of the Traders concerns. Many of the losses in the Custody Transfer regime are significant and, at present, remain non-recoverable. Sometimes these amount to millions of dollars. This situation should be addressed and the tendency reversed where possible. In this era of intensified energy transportation by tankers, it is crucial to understand and thus prevent apparent and physical losses.

KEY BENEFITS OF ATTENDING THE COURSE:

BENEFIT from the real-life Case Studies from the Course facilitator's own practice and up-to-date information on energy standards

ASSESS from the course material where losses could occur due to poor measurement and sampling practice

IDENTIFY product quantity and quality issues which can occur due to uncertain physical storage and pipeline conditions

GAIN insight into the various crude and product handling characteristics and how these can impact on losses

ANALYZE when a cargo should be heated and which crude oil washing methods should be employed when discharging a cargo of crude oil

ACKNOWLEDGE the constraints with the various measurement, sampling and analysis systems and be able to give recommendations for the use of alternative methods

UNDERSTAND what is and what is not an "acceptable loss" and when to pursue a claim

APPRECIATE the importance of the role of the Inspector and of high operating standards, and the need for clear instructions

LEARN the importance of the role of the Oil Loss Control Expert (Expeditor) who is at the 'coal face' with the Inspector and is equipped with the experience and knowledge of the various issues which can have a detrimental effect on product quantity and quality

CAPITALISE on the opportunity to learn from an expert how to improve your Company's position regarding Terminal and Vessel operations which can assist in the prevention of losses

ASSIST in revolutionising the industry by discussing and developing ideas, as a team project, for improvements in the Custody Transfer process.

Arend endeavours to "lift the lid" on the morass of bad measurement, sampling and analytical practice prevalent worldwide which have led to large oil trading losses; and points towards a position where all parties could operate to ethically higher standards and be more open in consequence. The final practical session looks at ways that this might be implemented.

Why should you attend?

This program is designed for those who want to be familiar with the issues surrounding the movement and handling of oil cargoes and decision makers relating to custody transfers.

Typically, but not exclusively, it would interest the following:-

- Oil Suppliers
- Oil Receivers
- Oil Traders
- Oil Trading Operators
- Oil Terminal Managers/operators
- Oil Terminal Stock Controllers

Course Agenda (1 day) introducing a comprehensive overview of the issues involved with possible solutions

Morning session

Session 1 – Tanker Cargo Loading and Discharging Sequence / potential causes of discrepancies

- Loading crude, products and blending on board – recap on importance of sampling
- Valve / tank / pump segregation for products
- Ship tank auto and manual measurements - issues
- OBQ/ROB – how should this be assessed properly?
- Vessel Experience Factor derivation and problems
- Crude assays and correct cargo handling of various crudes
 - Cargo heating - Waxy crudes – when should you heat (EI document)
 - The problem with high ROB and clingage
- Understanding Crude oil washing procedures and effectiveness
- Monitoring for effective stripping procedures
- Discharge of clean products
 - Final Line stripping / MARPOL line – contamination prevention
 - **Q & A session**
 - Shore line condition (free water – line fullness etc)
 - Adopting the present “line fullness policy” (ISO 11563 2003)
 - Single valve segregation
 - Transfers “away” during custody transfer operations
 - Traceability (i.e. records, print-outs etc)
 - Pipeline and valve integrity - “aging” testing schedules in place?

Session 2 – Physical or Apparent Loss (What is the difference?)

Review of causes of Losses (including contaminations)

- Descriptions of physical and apparent losses
- Impact on use of different tables between loading and discharging worldwide
- Example of real “physical” losses – ROB/OBQ
- Vapour emissions - “Light ends” losses
- Shore line condition & integrity (free water – line fullness – single valves etc)
- Accuracy of the measuring systems – Quantity
- Meters – types and plausibility
- shore tanks – e.g. floating roofs, volumetric shrinkage, flexing, single valves etc
- temperature layering – also probe error
- ship measurements – list, trim, VEF issues, OBQ, ROB, Pipeline volumes
- Single valve Terminals

- Pipeline integrity
- Shore tank integrity
- **Case Study Gabon**
- **Voyage Reconciliation Exercise**

Session 5 – Sampling systems and Quality control

- The agreed custody transfer procedure
- A Sampling Plan model – a guideline for all parties
- Export/Import of crude and products (different sampling strategy):
- Accuracy of the sampling system – Dynamic (Auto) to Static (Manual)
- Dynamic – Auto-inline sampling – mainly crudes
- Manual sampling – ship and shore – conventional and improved methods
 - Crude
 - Products - including “bench blends”, first-foots’ etc
- The importance of correct sample mixing prior to analysis
- Analysis and reporting
- Accuracy of the analysis – Quality – crude and products
- Importance of “repeatability and reproducibility”
- Correct reporting of results
- Sampling test method matrix – valuable comments
- Samples properly retained

Session 6 - Open discussion and closing practical session

- Where are losses occurring more often (Ship or Shore)?
- The way forward?
- Proposal of a risk assessment procedure for Traders, Inspectors, Stock Accountants, etc.
- Discuss how one can be prepared which will take into account the Q & Q issues and the weaknesses in the systems discussed over the day.

End of Training; Awarding attendance Certificates

Course Instructor



Arend van Campen – Tank Terminal Training

Arend van Campen is a long-standing member of the Energy Institute with over 40 years of experience as CEO, Terminal Manager, Marine Cargo Expediter, and Loss Prevention Advisor across global operations. TTT is officially recognized as an Energy Institute Learning Affiliate.

Arend holds a PhD in Information Physics and promotes the principle that safe, sustainable, and profitable operations are only possible through ethical behaviour, continuous learning, and informed decision-making.

He is also the founder of www.sustenance4all.com which developed an Artificial Intelligence named Cassandra to test HSEQ functionality and operational performance.

We make people better!