



Course Topics

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TANKER OPERATIONS COURSE

This *three-day* course covers the topics you want and need to know to help increase your understanding of tanker operations, design, function and management of, such as:

- Types, sizes, uses and design of tank vessels
- Maritime Terms and Definitions
- Governing Authorities - Flags - Registration
- Classification Societies - Port State Control
- ISM Codes - Vessel Manning - ISO 9000
- Draft - Trim - List - Basic Stability
- Vessel Engines - Fuel - Bunkers - White List
- Tanks - Pipes/Lines/Valves - Cargo Pumps
- Loading - Discharging - Ballasting - IGS
- Tank Cleaning Practices and Procedures
- Cargo Measurement - Compatibility
- Terminals - Sea Berths - Lightering
- Types of Cargo - Classification Methods
- Oil Spill Prevention / Cleanup / COFR
- Charter Parties - Demurrage - Laytime
- Weather Planning / Routing
- Vessel Vetting / FPSOs / FSOs
- COGSA / Hague Rules / INCOTERMS
- Worldscale - Hire - Freight Rates
- ISPS / MTSA Code - Security Issues
- Latest Pollution Laws and Regulations
- OPA 90 - ITOPF - CRISTAL - P&I Clubs
- Vessel Navigation and Watch Standing
- Maintenance - Practices/Costs
- Double Hulls - For Better or for Worse?
- Gas Carriers - Chemical Tankers – Barges

Program Objective: To expose the participants to the fundamentals of physical tanker operations, including tanker design, construction, cargo operations, pollution laws, voyage costing, chartering, regulatory bodies and industry organizations.

ADVANCED TANKER OPERATIONS

This *two-day* course covers the topics you need to know to better understand the more complex issues of oil tanker operations and management such as:

- Implementation of New Marpol Regulations
- Tanker Management Self-Assessment - TMSA
- Changes in ISGOTT Requirements
- Vetting - Questionnaires - Flag / Class Ratings
- Single Hull Phase Out Schedules
- Vessel Casualty Analysis - Flag / Class / Age
- CAS / CAP - Expanded Structural Surveys
- Ship Wrecks, Oil Spills and Regulations
- The Human Factor of Tanker Operations
- How the Industry was Changed Due To
Torrey Canyon - Amoco Cadiz - Exxon Valdez
and Other Major Accidents / Oil Spills
- Tank Cleaning Procedures - Special Cargoes
and Requirements
- Return of the Pirates - Precautions and
Counter-Measures
- Ship's / Master's Business
- Master's / Management's Responsibilities / Liabilities
- General Performance Clauses / Requirements
- Discussion of Various Maritime Claims Issues
- New Training Requirements / Facilities
Methods / STCW Requirements
- Double Hull vs. Alternate Hull Designs
- Incident Investigation: What is an Incident?
Types of Incidents - Identify What, Why, How It Happened
- How To Prevent It From Happening Again - Incident Reporting
Root Cause Analysis: Finding reasons for oil spills, tanker
accidents and ways to reduce them

Program Objective: To study the links between catastrophes and industry regulations and to take an in-depth look at tanker operations, from new vessel designs to the implementation of the latest regulations and most everything in between.

LIQUEFIED GAS CARGO OPERATIONS

This two-day course provides an excellent overview of the Liquefied Gases currently used and transported by ship around the world today including LNG, LPG, Ammonia, and the chemical gases, their sources, uses, markets, hazards/requirements, handling, storage, measurement, the tanks they are stored in and the specialty ships that carry them. Among the topics covered will be:

- State of Matter - Solids / Liquids / Gases
- What is Liquefied Gas? Its Markets / Uses
 - LNG-LPG-NGLs-Chemicals
- Sources of Natural Gas - Gas Processing
- Benefits / Methods of Liquefaction
- Current / Proposed LNG Projects
- History of LNG / Liquefied Gas Industry
- Potential Hazards / Safety Precautions
- Government Regulatory Agencies
- Storage Tanks - In-Ground / Full Containment / Other
- Shore Terminal Equipment / Instrumentation
- Gas Carrier Designs - LNG / LPG / Ethylene - Other
 - Refrigerated / Pressurized / Semis / LNG
- The IMO/IGC Code - Flag State/ Class / SIGTTO
- Cargo Tanks / Types A,B,C - Membrane – Other
- GIIGNL - CLNG - GSA - ASTM – Other
- Cargo Handling Equipment - Pipelines, Pumps, Heaters, Vaporizers, Re-liquefaction Plants, etc.
- Inert Gas and Nitrogen Systems
- Cargo Handling Operations - Loading, Discharging, Lightering - FSRUS / FSOS - Cool-Down, Gas-Up, etc.
- Ballasting - Cleaning Tanks - Gas Freeing
- Terminals - Ship / Shore Interface
- Custody Transfer Measurement / Calculation
- API / ISO Measurement Standards / GIIGNL Handbook
- ICS Safety Guide - Gas / Health and Safety
- Typical Sales Agreements – SPAs
- Emergency Procedures / Contingency Plans
- Industry Safety Record – Accidents
- Industry Trends and Developments

Program Objective: To provide participants with a practical overview of this fastest growing part of the industry by providing them with a better understanding of the nature of the Liquefied Gas cargoes being carried on ships today, how they are safely handled, accounted for, stored, transported and ultimately used.

TANKER OPERATIONS COURSE

Petroleum / Liquefied Gas / Chemicals

This *three-day* course covers the topics you want and need to know to help increase your understanding of the design, function, operations and management of the oil, liquefied gas and chemical tankers, such as:

- Types, sizes, uses and design of tank vessels
- Maritime Terms and Definitions
- Governing Authorities - Flags - Registration
- Classification Societies - Port State Control
- ISM Codes - Vessel Manning - ISO 9000
- Draft - Trim - List - Basic Stability
- Vessel Engines - Fuel - Bunkers - White List
- Tanks - Pipes/Lines/Valves - Cargo Pumps
- Loading - Discharging - Ballasting - IGS
- Tank Cleaning Practices and Procedures
- Cargo Measurement - Compatibility
- Terminals - Sea Berths - Lightering
- Types of Cargo - Classification Methods
- IBC/ IGC Codes
- Oil Spill Prevention / Cleanup / COFR
- Charter Parties - Demurrage - Laytime
- Weather Planning / Routing
- Vessel Vetting / FPSOs / FSOs
- COGSA / Hague Rules / INCOTERMS
- Worldscale - Hire - Freight Rates
- ISPS / MTSA Code - Security Issues
- Latest Pollution Laws and Regulations
- OPA 90 - ITOPF - CRISTAL - P&I Clubs
- Vessel Navigation and Watch Standing
- Maintenance - Practices/Costs
- Double Hulls - For Better or for Worse?
- Gas Carriers - Chemical Tankers - Barges
- Types of Ships (1,2,3) - Types of Tanks (A,B,C, Other)

Program Objective: To expose the participants to the fundamentals of physical tanker operations, including tanker design, construction, cargo operations, pollution laws, voyage costing, chartering, regulatory bodies and industry organizations.

CHARTER PARTIES, LAYTIME AND DEMURRAGE

This intense two-day course provides you with the tools and covers the topics that will help you to increase your understanding of charter parties, laytime and demurrage, such as:

- Types of Charter Parties - Spot -Voyage - Bareboat - Demise - Time
- Chartering Terms and Definitions
- Review of Industry Contracts - Differences
- Typical Industry C/P Clauses
- Owner's vs. Charterer's Items
- Bunker Acquisition and Cost
- Notice of Readiness (NOR) – Tendered Accepted - Not Accepted
- Laytime - Demurrage - Dispatch
- Voyage Costing - Vessel Utilization
- Laydays - Windows
- Time Sheets - Time Counts - Not Counts
- Typical Exceptions to Laytime / Demurrage
- Calculations of Demurrage
- Elements of a Demurrage Claim
- Investigating a Claim
- Sample Demurrage Calculation Exercises
- Arbitration Vs. Litigation
- Time Bar - Filing - Refuting Claims
- Mock Arbitration of Actual Demurrage / Operations Claim
- Worldscale - AFRA - Freight Rates
- Performance Clauses – Vessel Approval
- Vessel Vetting - ISM / ISPS / MTSA Codes
- Once on Demurrage Always on Demurrage?

Program Objective: To familiarize the participants with the key clauses of widely used charter parties, basic calculation of laytime and demurrage and charter hire under various types of charters, and the mechanics of an arbitration.

ADVANCED CHARTER PARTIES, LAYTIME AND DEMURRAGE

This two-day course covers the topics you need to know to better understand the more complex issues of charter parties, laytime and demurrage such as:

- Actual Arbitration Rulings:
 - Demurrage
 - Vessel Performance/Non-Performance
 - Arrived Ship - NOR - Laydays
 - Safe Berth, Safe Port
 - Multiport Discharge
 - Complex Cargoes
- Intertanko's Latest Positions on Key Charter Parties and Clauses
- Key Clauses to Protect Your Interest When Special Cargoes are Carried
- Terms and Conditions of Terminals vs. Charter Parties and Relative Clauses
- Detailed Discussion of Owner's Items vs. Charterer's Items and Agents
- Pitfalls of Ship Fixing by Telex
- Optimizing Vessel Utilization and Selection
- Mock Case Discussions
- Discussion – When The Contract Fails
- New MTSA - ISPS Clauses
- Advanced Loss Control Using Charter Parties and Clauses
- Sample Demurrage Calculation Exercises
- Review of "Parallel Contracts" - Purchase / Sales Agreements
- New Dispute Settlement Options – Shortened Arbitration / Negotiation / Mediation
- Incident Investigation: What is an Incident? Types of Incidents - Identify What, Why, How it Happened - How to Prevent it from happening again - Incident Reporting - Root Cause Analysis: Finding reasons for demurrage and ways to reduce it

Program Objective: Participants take an in-depth study of the industry key charter party clause interpretation, actual case studies, arbitration rulings and awards, and parallel contracts, i.e. purchase and sale agreements. This session will most benefit anyone already familiar with the fundamentals of contracts and demurrage.

MANAGING DEMURRAGE AND RE-BILLABLES

This one-day, contract-centered program details ways to manage demurrage and identify re-billable items that are many times hidden in contracts by discussing issues involving topics such as:

- Demurrage >What Is It? >What is Its True Value?
 - >Ways to Manage It
- ETAs / Speed-Up / Slow-Down
- Scheduling vs. Demurrage Costs
- Early Load Clause / Others
- Voyage Costing / Planning
- Charter Parties, Types and Provisions
- Other Contract Types
- Responsibilities Under Each Contract
- Worldscale Terms and Conditions
- Sample Demurrage Calculation Exercises
- Performance Clauses
- On-Hire / Off-Hire
- Company Policy and Vessel Operations
- Demurrage Calculations Under Varying C/P's
- Owner's Items vs. Charterer's Items
- INCOTERMS
- Best Vessel Utilization Methods
- Statute of Limitations
- Re-billables - Identifying and Valuating
- Spot Charters / Time Charters / Purchase / Sales / Supply / COA

Program Objective: To provide participants with the tools to manage demurrage through operational planning and contract provisions. To show ways to find the many times overlooked re-billable items arising from the various contracts involving ship/barge oil movements.

MARINE CUSTODY TRANSFER, PETROLEUM MEASUREMENT AND LOSS CONTROL

*This **three-day** course covers the topics you want and need to know to better understand the complexities of the measurement transfer and accounting of marine petroleum cargoes, such as:*

- Ship / Shore Measurement Terms and Definitions
- Static Measurement - Manual - Automatic
 - Open / Closed / Restricted Methods
- Dynamic Measurement / Sampling / Proving
- Ship / Shore Measurement - All Aspects - VEF, OBQ, ROB, Free Water, Line Fills, Wedge, Etc.
- Field Activities - Need for Good Inspections
- Latest Industry Standards, Procedures and Practices - API - EI - ASTM - ISO - ANSI
- API MPMS Chpt 12 Volume Calculations
- Inventory / Custody Transfer Oil Accounting
- Basic Ship / Barge Design and Operation
- Bills of Lading - Validity and Use
- Assuring Measurement Accuracy
- Characteristics of Petroleum and its Products
- Safety Aspects and Concerns
- Loss Prevention and Recovery
- Legal Aspects of Custody Transfer and Carriage
- Causes of Loss - Loss Investigations
- Contract Terms and Conditions - INCOTERMS
- ISPS / MTSA Security Codes
- Documentation - Record Keeping
- Equipment / Hardware / Software Update
- Cargo Reconciliation - Voyage Analysis
- Shore Storage Tanks / Terminals / Refinery Operations
- Measurement Technology Updates

Program Objective: To study the complexities and difficulties involved in marine custody transfer operations, measurement and loss control from both ship and shore perspectives, and reviews the latest industry standards.

ADVANCED COURSE PETROLEUM LOSS CONTROL, CLAIMS AND RECOVERY

This two-day course builds on the basics you know to increase your understanding of ship/shore petroleum loss control and effectiveness in claims and recovery, such as:

- Recognizing the Existence of a Loss
- Determining Magnitude of Loss
- Assigning Responsibility and Allocation of Loss
- Detailed Cargo Reconciliation / Voyage Analysis
- How Best to Proceed if Loss Exists
- Calculation of Acceptable Loss Allowance
- Trouble Shooting Measurement Problems
 - Equipment, Personnel and Procedures
- Finding Hidden Cargo – Accidental or Intentional
- Bills of Lading / INCOTERMS / UCC
- Field Activities that Reduce Losses up to 45%
- Importance of Good Inspectors / Inspections
 - How to Get Them
- Practical Sample Problems and Calculations
- Loss Prevention and Recovery Methods
- What's Best Recovery / Settlement Option
- Minimizing Risk and Loss Exposure
- Elements of a Successful Loss Control Program
- Time Limits - Filing - Refuting Claims
- Mock Arbitration of Actual Cargo Loss Claim
- Reduce Loss – Increase Demurrage?
- System Troubleshooting – Avoid Pitfalls
- Reducing Risk thru Charter Party / Contract Clauses
- Oil Loss as an "Incident"
 - Types of "Loss Incidents"
 - Determine What, Why, How Loss Happened
 - Determine How to Prevent it from Happening Again
 - Develop Claim from Raw Data
 - How to "Walk" Claim to Conclusion - Beginning to End

Program Objective: To expose participants to the various methods and techniques currently available to prevent oil losses, minimize exposure to loss and identify and recover those that do occur.

INSPECTION / SURVEY OF MARINE PETROLEUM CARGOES REVIEW & CERTIFICATION

This five-day program offers qualified certification candidates three days of review and training before taking the two-day exam. The three-day review course can usually satisfy the requirement that candidates have successfully completed an appropriate training program.

Review topics include:

- > Industry Measurement and Safety Standards
- > API – ISGOTT Procedures and Regulations
- > Terminal / Ship Operations / Safety
- > Petroleum Measurement Review All Aspects
- > Contract Terms and Definitions – Documentation
- > Loss Prevention and Control
- > Cargo Reconciliation – Identification of Loss
- > VEF - Wedge - Deadweight Survey

The two-day exam offers qualified candidates the opportunity to become certified as knowledgeable in the area of Inspection or Survey of Marine Petroleum Cargoes.

THE EXAM

Candidates must have one year of experience as a cargo inspector or have equivalent time involved with the measurement of marine petroleum cargoes and pass a comprehensive two-part exam. Part One consists of 400 multiple-choice, true/false and fill-in-the-blank questions. These questions are totally based on API measurement standards and safety issues found in the International Safety Guide for Oil Tankers and Terminals (ISGOTT). Part Two consists of five practical problems including – Knowledge of Applicable Standards, Finding and Allocating Losses by Voyage Analysis, Deadweight Survey, and Calculation and Application of VEF and Wedge.

CERTIFICATION

Successful candidates in the certification program will be awarded certificates as being knowledgeable in the area of "Inspection" or "Survey" of Marine Petroleum Cargoes, depending on the type of experience of the candidate. The certificates will be issued by the International School for Inspectors of Petroleum.

Program Objective: Provides the opportunity for qualified individuals to become certified as being knowledgeable of the industry standards of Inspection / Survey of Marine Petroleum Cargoes.

ANATOMY OF THE PETROLEUM INDUSTRY

*This **special one-day** course provides a comprehensive overview of the fascinating, complex oil industry. You'll learn about oil from its formation to its ultimate use, and everything in between, such as:*

- Description of the Petroleum Industry - What is it?
Upstream / Downstream / Midstream
- History of the Petroleum Industry - Titusville until Today
- How Oil is Formed - Where it Comes From - How it Affects Us
- Finding Oil - Onshore / Offshore
Formation Types / Oil Reserves / How Much Do We Have?
- How Oil is Produced - Onshore / Offshore
How Much Do We Use? / How Much Do We Need?
- Treatment of Oil for Sale / Shipment
- Storage of Oil: Terminals / Tanks / Transshipment
- Transportation of Oil: Ships-Barges-Pipeline-Truck-Rail
- Refineries / Refining - How Gasoline is Made
Distillation / Hydro / Cat Cracking / Other
- Types of Products Made - Crude Oil Products
- Processing/Handling of Natural Gas / Propane Butanes
- Marketing/Pricing of Crude Oil / OPEC / NYCE, etc.
- Accounting of Oil / Products
- Pricing of Gasoline
- Industry Organizations - API / EI / ISO / ASTM / Others
- Regulatory / Environmental Issues / Drill or Not to Drill?
- Global Warming and the Oil Industry
- Terrorism and the Oil Industry
- Future of the Oil Industry - Bio Fuels - Right or Wrong?
Estimated Reserves Left / Growth in LNG Usage /
Gas to Liquids? / Is the Petroleum Age Over?
What is next for the Industry?

Program Objective: To raise the participant's level of awareness of what the petroleum industry is and what makes up all its varied components. The course follows a barrel of oil from its origins in the ground to its ultimate consumer use.

CLAIMS PREPARATION, MITIGATION FOR MARINE PETROLEUM CARGOES

This **two-day**, claims-centered program, is presented from a layman practitioner's perspective. By walking the participants through the seven phases of claims handling, it details how best to develop, file, negotiate and settle claims involving marine petroleum cargoes. The following topics are covered:

- Definition / Types of Claimable Loss
- Recognizing Existence of Claimable Loss
- Verification / Valuation of Loss
- Establishing Acceptable "Loss Allowance"
- Assigning Responsibility / Allocation of Loss
- Cargo Reconciliation / Voyage Analysis
- How Best to Proceed if Loss Exists
- Time Bar - Limit - Filing - Refuting Claims
- Documenting / Investigating a Claim
- Reduced Loss – Increased Demurrage?
- How to File a Claim / How to Negotiate a Claim
- The Seven Phases of Claims Handling
- What Documentation is Necessary for the Claim?
- What are the Best Recovery / Settlement Options?
- Someone's Loss is Someone's Gain?
- Laws Covering Carriage of Goods by Sea
 - Hague / Visby / COGSA / Hamburg Rules / Others
- Contracts Covering Purchase/Sales:
 - Agreement – GTCs / STCs
 - Charter Parties / INCOTERMS
- Defense Against a Claim
- Recourse if Negotiations Fail:
 - Litigation / Arbitration / Mediation
- Mock Arbitration of Actual Cargo Loss Claims

Program Objective: To provide participants with the tools to be able to recognize whether a contract breach has occurred, and then how to best proceed if it becomes necessary to develop, file, or refute a cargo claim.

TERMINAL OPERATIONS AND OPERATIONAL AUDITS

This **two-day** course covers the topics you want and need to know to increase your understanding of terminal operations, management, regulatory requirements, and operational audits, such as:

- Regulatory Bodies / General Regulations / Industry Organizations
- General Terminal Design
- Tank Types and Design - Fixed, Floating / Cones up/down
- Terminal Pipes, Pumps and Systems
- Inventory Control / Planning / Minimizing Terminal Losses
- General Operating Practices
- Tank Maintenance / Handling of Hazardous Waste (tank bottoms)
- Leak Detection / Prevention
- Soil Remediation
- Ship/Shore Coordination
- Environmental Issues - Evaporation/Leakage / Laboratories
- Measurement Systems - Manual / Automatic
- General Safety Issues
- Personnel Training Programs
- Vapor Recovery Systems
- Tank Certification / Tank Strapping / Verification
- Terminal Auditing - Compliance / Safety / Inventory
- Recognizing Operational Shortcomings
- Storage Issues / Cargo Commingling Issues / Handling Water
- Security Concerns

Program Objective: To give participants a practical knowledge of the workings of an oil terminal and how to effectively audit it as to its overall operational, governmental and safety compliance and oil loss accountability.

TANKER OPERATIONS & MARINE CUSTODY TRANSFER, PETROLEUM MEASUREMENT AND LOSS CONTROL

*This intensive, specially combined **three-day** course covers the topics you want and need to know to help increase your understanding of tanker design, operations, function and management of. It also details the topics that will allow you to better understand the complexities of the measurement transfer, and accounting of marine petroleum cargoes. Some of the topics covered are:*

- Types, sizes, uses and design of tank vessels
- Maritime / Measurement Terms and Definitions
- Governing Authorities - Flags - Registration
- Classification Societies - Port State Control
- ISM Codes - Vessel Manning - ISO 9000
- Draft - Trim - List - Basic Stability
- Vessel Engines - Fuel - Bunkers - White List
- Tanks - Pipes/Lines/Valves - Cargo Pumps
- Loading - Discharging - Ballasting - IGS
- Tank Cleaning Practices and Procedures
- Cargo Measurement - Compatibility
- Terminals - Sea Berths - Lightering
- Types of Cargo - Classification Methods
- Oil Spill Prevention / Cleanup / COFR
- Charter Parties - Demurrage - Laytime
- Weather Planning / Routing
- Vessel Vetting / FPSOs / FSOs
- COGSA / Hague Rules / INCOTERMS
- Worldscale - Hire - Freight Rates
- ISPS / MTSA Code - Security Issues
- Latest Pollution Laws and Regulations
- OPA 90 - ITOPF - CRISTAL - P&I Clubs
- Vessel Navigation and Watch Standing
- Maintenance - Practices/Costs
- Static Measurement - Manual - Automatic / Open
- Dynamic Measurement and Sampling
- Ship / Shore Measurement – All Aspects - VEF, OBQ, ROB, Free Water, Line Fills, Wedge etc.
- Field Activities – Need for Good Inspections
- Latest Industry Standards, Procedures and Practices - API - EI - ASTM - ISO – ANSI
- Shore Storage Tanks / Terminals /Refinery
- Inventory / Custody Transfer Oil Accounting
- Bill's of Lading - Validity and Use
- Assuring Measurement Accuracy
- Characteristics of Petroleum and its Products
- Safety Aspects and Concerns
- Loss Prevention and Recovery
- Legal Aspects of Custody Transfer / Carriage
- Causes of Loss - Loss Investigations
- Contract Terms and Conditions
- Documentation – Record Keeping
- API MPMS Chapter 12 Volume Calculations
- Equipment / Hardware / Software Update
- Cargo Reconciliation – Voyage Analysis

Program Objective: To expose participants to the fundamentals of physical tanker operations, including tanker design, construction, cargo operations, pollution laws, voyage costing, chartering, regulatory bodies and industry organizations. It also details the complexities and difficulties involved in marine custody transfer operations, measurement and loss control from both ship and shore perspectives, and reviews the latest industry standards in these areas.