ISGOTT & SIGTTO Requirements for the Operations and Safety

OSFP maintenance ensures efficient offshore production operations for of Tankers and Oil & Gas Terminals.

Introduction

Liquid or gaseous hydrocarbon cargoes are among the commodities with the highest global demand. Safe handling, shipping, and storage of such precious and hazardous commodities are critical matters that have been well researched and are top priorities for a number of international organizations.

The International Chamber of Shipping (ICS), the Oil Companies International Marine Forum (OCIMF), the International Association of Ports and Harbors (IAPH), and the requirements of the IMO as reflected in the SOLAS and MARPOL Conventions were the basis for the preparation of this Course N Carry ISGOTT & SIGTTO Requirements for the Operations and Safety of Tankers and Oil & Gas Terminals training course. These organizations have all developed guidelines and specifications that were included in ISGOTT's most recent version (Version 6) for the Petroleum / Oil Tankers & Terminals and SIGTTO for LPG & LNG Gas Carriers and Terminals.

Developing strong terminal management abilities, supporting transport and storage operations, and emphasizing cargo planning and transfer needs are all goals of the training program. The workshop will include risk assessment and hazard identification in order to help tanker and terminal staff manage a safe transport and storage procedure and behave appropriately in emergency and contingency circumstances. The main topics and obstacles related to oil and gas tankers and terminal interaction measures in the workplace, from the managerial to the individual level, will also be covered in this training session.

Objectives

This engaging and sophisticated training program offers personnel operating onboard gas carriers, oil tankers, and terminals advice on the safe handling and transportation of petroleum and gas products. The training course ISGOTT & SIGTTO Requirements for the Operations and Safety of Tankers and Oil & Gas Terminals will help the delegates execute the ISGOTT & SIGTTO requirements that are part of the Safety Management System in their own organization.

The following goals will be accomplished by the delegates:

- Recognize the role played by international organizations including the IAPH, IMO, OCIMF, MTCOT, and ICS.
- Overview of handling liquid bulk cargo, including the fundamentals of gas handling and the characteristics of liquefied gas
- Learn about the operations, kinds of storage tanks, and bulk cargo storage for gas and liquid. Recovery of boil-off gas system
- Recognize the different flammability risks connected to handling, be able to assess the risks of hydrocarbon products, and know what safety measures to take on tankers and terminals.
- Examine and strengthen the relationship between the tanker and the terminal, and be aware of the different regulations, policies, and procedures for managing ballast and cargo.
- Learn about cargo handling's enclosed space entrance, carriers, and packed goods. Also, become familiar with the emergency protocols.
- Learn about Safety Management Systems (SMSs), along with related tools and procedures including work permits and risk assessment.
- Administration of marine terminals and the vital role of the tanker/terminal interface
- The International Ship and Port Facility Security (ISPS) Code and maritime security

Training Methodology

A range of tried-and-true professional learning strategies will be employed in this ISGOTT & SIGTTO training course to guarantee optimum grasp, retention, and understanding of the material offered. The training session will involve a lot of participation and interaction. This calls for frequent communication between the course specialist teacher and the delegates. Through supporting, thorough course manual handouts and a PowerPoint presentation for each session, the training course will provide participants an in-depth understanding of the material, enabling both practical application and reinforcement.

Organizational impacts

Professionals who complete this training program will assist their organizations in the following ways:

- Professionals with training and experience supervising the operations of oil and gas terminals
- Good comprehension of the standards of the ISGOTT & SIGTTO Guidelines
- Identifying and managing risks appropriately by doing in-depth research and forecasting
- Acknowledging the necessary terminal operation standards to enable the organization to remain relevant in that specific sector.
- Utilizing cutting-edge methods and ideas to minimize expenses and achieve operational excellence
- Regular audits by qualified and seasoned specialists have increased operational quality and efficiency.
- When participating in the execution and/or management of terminal operations, current and new personnel should get regular and complimentary training on best practices.

- Higher investments as a result of improved organizational prospects for Ships and Terminals and enhanced credibility

Personal Imapct

Professionals registering for this ISGOTT & SIGTTO Requirements for the Operations and Safety of Tankers and Oil & Gas Terminals training course will get the following benefits:

- Complete comprehension of how oil and gas terminals operate in accordance with SIGTTO and ISGOTT regulations
- Increased self-assurance and knowledge to instruct other experts on optimal procedures for efficient terminal management
- Increasing perspective and foresight to identify risks and put procedures and systems in place to deal with them in order to avoid significant corporate loss
- Ensuring consistent and fulfilling advancement in one's profession
- Acknowledging the necessary benchmarks and standards and making sure that one's organization complies with them
- Acquiring knowledge and developing one's capacity to take on chances for more senior positions and responsibilities, such as managing all terminal operations

Who should attend?

The ISGOTT & SIGTTO Requirements for the Operations and Safety of Tankers and Oil & Gas Terminals technical training course is designed to serve as a foundation workshop for trainees with little to no experience in liquid bulk handling operations as well as for marine terminal staff, marine operation staff, oil movement personnel, custody measurement people, metering engineers, and process engineers who have limited direct understanding of liquid bulk handling operations. Attendees may include, but are not restricted to:

- Managers and Coordinators of Marine Terminal Facilities
- Superintendents, Supervisors, and Engineers of Terminals
- Managers, engineers, and officers in charge of environmental and safety
- Captains, officers, and chief engineers involved in oil and gas
- Inspectors of Ships
- Members of the Spill Management Team
- Supervisors of Oil and Liquefied Gas Transfers
- Coordinators for Marine Shipping

Course Outline

Day 1

An Overview of the Directives and Standards of the International Organizations, ISGOTT & SIGTTO

- IMO
- Requirements for SOLAS and MARPOL Conventions
- The International Maritime Chamber (IMC)
- The International Marine Forum of Oil Companies (IMFOC)
- The Ports and Harbors International Association (PHIA)
- The MTCOT, or Marine Terminal Competence and Training Guide,
- In its most recent iteration, Version 6, ISGOTT
- SIGTTO
- SIRE Examining
- IGC Number
- Code for ISPS

Day 2

Part 1 General Information About ISGOTT

- Basic Properties and Hazards of Petroleum
- Flammability
- LEL and UEL
- Features of hydrocarbons and the notion of toxicity
- Gas Evolution and Measurements
- Measuring and sampling gases
- Reducing the Risk of Vented Gas
- Hydrocarbon gas detection systems: Fixed and Portable
- The risks involved with handling, storing, and transporting leftover fuel oils
- Electricity That Is Static
- Electrostatics principles
- Typical safety measures to avoid electrostatic dangers
- Additional potential causes of electrostatic risks
- Controlling Ship and Terminal Risks and Hazards
- System of management
- Risk control
- Tag-out/lock-out by the Stop Work Authority
- Regulation of dangerous energy
- Individual security
- Avoiding explosions and fires Management of possible sources of ignition
- Hazardous locations for electrical installations and equipment
- Fire Safety
- Theory of firefighting
- Types of fires and suitable firefighting materials
- Portable and stationary fire extinguishers
- Worldwide shore fire network
- Wearing protective apparel
- Systems for automatically detecting fires

- Safety
- Assessment of security threats and risks
- Plans for security
- The International Ship and Port Facility Security Code's obligations
- Human Aspect
- Procedures for risk assessment Headship
- Authority to Stop Work
- Level of Manning
- Competency, Experience, and Training

Information about Part 2 Tankers of ISGOTT

- Handling Safety and Emergencies
- The ISM Code, or International Safety Management
- Permission to Work Systems and Work Scheduling
- Oversight of contractors
- Managing Simultaneous Operations
- Closed Areas
- Entry safety management and authorization for enclosed spaces
- Recognizing confined areas
- The dangers of environments with confined spaces
- General specifications and safety measures
- Operate in confined areas
- Recovery and removal from confined areas
- Wearing respiratory protective gear
- Systems Aboard Ship
- Plans for loading and unloading
- Systems using fixed inert gases
- Systems for venting
- Systems for ballast and cargo
- Operations on-Ship
- Transport activities
- Cleaning of tanks
- Liberating gas
- Cleaning of Crude Oil
- Ballast operations
- Measurement, loading, dipping, and sample of cargo

Day 3

Information about ISGOTT Part 3 Marine Terminals

- Administration of Marine Terminals
- Information System for Marine Terminals
- Record-keeping
- Operations of Marine Terminals
- Limiting the circumstances under which an operation can occur

- Storms with electricity
- Double banking
- Terminal/tanker access
- Operations for over-the-tide cargo
- Activities in which the tanker is not constantly afloat
- Pressure spikes that occur in pipes
- Mitigation of the risk of pressure surge
- Pigeonholing
- Equipment and Systems for Marine Terminals
- Electrical apparatus
- Equipment for lifting
- Luminance
- Terminal/tanker electrical isolation
- Practices for bonding and earthing in the terminal
- Equipment for Cargo Transfer
- Armaments for Marine Loading
- Hoses for cargo
- Systems for Controlling Vapour Emissions
- Drainage and containment during cargo transfer
- Systems for emergency shutdown
- Fire Safety at Marine Terminals
- Fire safety at marine terminals
- Systems for alerts and signals
- Systems for detection and alarm at terminals
- Equipment for combating fires
- Firefighting service accessibility
- Emergency Readiness and Departure
- Summary
- Emergency scenario hierarchy
- Emergency plan for terminals (parts and methods)
- Plan for responding to spills
- Personnel escape routes and emergency evacuation
- Emergency preparedness and drills
- Tanker removed from berth in an emergency

Interface of ISGOTT Part 4 Ship/Shore (Tanker/Terminal)

- Interactions
- Steps to take and safety measures
- Pre-arrival communication of data
- Pre-boarding information sharing
- Conference prior to transfer
- Concurred loading and unloading schedule
- Consent to perform the necessary repairs
- Berthing and Mooring
- Mooring security
- Safety of moorings
- Getting ready to arrive
- Staying at dockside berths
- Sleeping at mooring buoys

- Precautions for Cargo Operations on Tankers and Terminals
- Superstructures with external apertures
- Systems for central air conditioning and ventilation
- Gaps in the cargo tanks
- Checking the cargo tanks of a tanker before loading
- Inspectors of maritime cargo
- Leaks and spills
- Fighting fires when the ship is positioned next to a terminal
- Fighting fires when near other ships
- Notifications
- Manning specifications
- Command of automobiles and other machinery
- Operations using helicopters
- Operation Bunkering
- Checklist for Bunkering Safety
- The Checklist for Ship/Shore Safety
- The Ship/Shore Safety Checklist's composition
- An example of a safety letter
- Guidelines for finishing the Ship/Shore
- SSSCL: Ship/Shore Safety Checklist

Day 4

Details of SIGTTO Gas Carrier / Terminal

- Overview of Liquified Gases
- LNG
- LPG
- Safe jetty layouts and procedures
- Characteristics of Liquid Gases
- Chemical characteristics
- Physical characteristics
- Fundamentals of refrigeration
- Nitrogen and inert gas
- Development of hydrates
- Gas that has liquefied leaking
- Densities of liquids and vapours
- Flammability
- Fundamentals of Design for Gas Carrier
- The codes for gas carriers
- Systems for containing cargo
- Types and layout of gas carriers
- Certification and surveys
- The Ship's Instrumentation and Equipment
- Pipes and valves for cargo
- Vaporizers, warmers, and cargo pumps
- Plants for liquefaction and boil-off prevention
- Compressors for cargo and related machinery

- Systems using nitrogen and inert gas
- Electrical apparatus in areas where gas is harmful
- Instrumentation for Monitoring Level, Pressure, and Temperature
- Systems of custody transfer
- The Terminal's Instrumentation and Equipment
- Systems for transferring cargo
- Systems for shore storage and containment
- Heat exchangers, compressors, and pumps
- Instrumentation for Monitoring Level, Pressure, and Temperature
- Fire-fighting Equipment Inspection, maintenance and training

Day 5

SIGTTO Gas Carriers / Terminal Management & Communication

- Ship/Shore Interaction
- Control and supervision
- Communications at the jetty, before the tanker arrives, and throughout the cargo operation
- Checklist for ship and shore safety
- Mooring and sleeping arrangements
- Attaching and disconnecting hard arms and cargo hoses
- Procedures for managing cargo
- Connected emergency shutdown mechanisms
- Handout for the terminal: Details and guidelines
- Operations for Handling Cargo
- Examining the tank
- Loading techniques
- The loaded ship
- Operation of the reliquefication plant
- Boil-off of LNG as fuel
- Procedures for discharging
- Ship-to-ship transfer
- Measurement and Calculation of Cargo
- Particular procedures for gas shipments
- Air density and vacuum density
- LNG measurement
- Measurement from the shore as opposed to ship measurement
- Modifications to the Ship's List and Trim
- Procedures for ship/shore calculations
- Documentation for cargo
- Individual Well-Being and Security
- Cargo risks
- Flammability
- Hazardousness
- Access to enclosed areas
- Individual defence
- Procedures for Emergencies
- The Main Risks

- Fighting techniques for liquefied gas flames
- Procedures for emergencies
- Emergency shutdown and release
- Ship withdrawal from berth

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