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ميناء الفجيرة
ص.ب : ٧٨٧ – الفجيرة
الإمارات العربية المتحدة
فاكس : ٩-٢٢٢٨٨١١ (الادارة)
٩-٢٢٢٨٥٥٥ (العمليات)
٩-٢٢٢٨٣١٢ (الهندسة)
٩-٢٢٢٨٠٢٢ (بحرية)

To:	**All Agents / Bunkering Companies / De-Sloping Companies / Oil Terminal Users / Federal Transport Authority / Hydrographic Office-UK**
Attn:	**General Manager / Operations Manager**
From:	**Capt. Tamer Masoud – Harbour Master**
Facsimile No.:	City: **Fujairah** Country: **U.A.E**
Ref. No. **MD/FAX/19/088**	Date: **20 March 2019** No. Pages: 32

Notice To Mariner No. 256

(Version 1)

SUBJECT : SAFETY / SECURITY REGULATIONS & REQUIREMENTS FOR STS TRANSFER OF LPG AND LNG AT FOAA "G"

TABLE OF CONTENTS

1 DEFINITIONS

AIS	:	Automatic Identification system.
BS EN	:	British Standard European Norm.
BOG	:	Boil-off Gas
CAP	:	Condition Assessment Programme
CDI	:	Chemical Distribution Institute
Discharging Ship	:	A ship which, for operational reasons, requires transfer liquefied gases to another ship.
ESD	:	Emergency Shut Down
ETA	:	Estimated Time of Arrival
FAL	:	Convention on Facilitation of International Maritime Traffic
FOAA	:	Fujairah Offshore Anchorage Area.

ICS		International Chamber of Shipping
IGC Code	:	International Code for the Construction and Equipment of Ships carrying Liquefied Gases in Bulk.
IGS	:	Inert Gas system
ILO	:	International Labour Organisation
IMO	:	International Maritime Organisation
ISO	:	International Organization for Standardisation
LNG	:	Liquefied Natural Gas
LPG	:	Liquefied Petroleum Gas
Mooring and Unmooring at Anchorage	:	Mooring and unmooring when one ship is at anchor.
MARV	:	Maximum Allowable Relief Valve Setting
MEPC	:	Marine Environment Protection Committee
MOU	:	Memorandum of Understanding
MSC	:	Maritime Safety Committee
MSDS	:	Material Safety Sata Sheets
OCIMF	:	Oil Companies International Marine Forum.
P&I Club	:	Protection and Indemnity Club
Primary Fenders	:	Large fenders to absorb impact energy and prevent contact between the ships if they should roll. These fenders are secured along the parallel body of either ship.

Receiving Ship	:	A Ship which receives liquefied gases from a discharging ship.
Rope Messenger	:	Rope of adequate and size for transferring mooring lines between ships
Secondary Fenders	:	Fenders to prevent contact when the ships are not lying parallel to each other, especially during berthing and unberthing operations. These fenders may be rigged on either ship
SIGTTO	:	Society of International Gas Tanker and Terminal Operators.
SIRE	:	Ship Inspection Report Programme
STS	:	Ship to Ship
Transfer Area	:	The area within which the transfer takes place. Transfer areas are those chosen as areas where transfer operations can safely take place, usually with the agreement of the nearby coastal authorities or in accordance with specific port regulations.
UAE	:	United Arab Emirates
VHF	:	Very High Frequency

2. TARIFF (Tariff index Number 329 as seen on Port Tariff**)**

329.3 LNG Ship to Ship (LNG-STS) in designated area at FOAA

The Marine Charges will be Dhs. 2.35 x G.T. with minimum charge of Dhs. 215,000/-.

Maximum time allowed for STS Berthing operation is 5 hours and for STS Unberthing operation is 4 hours. Additional hours will be charged as per Port Tariff.

Note: If Pilot boarded the vessel and movements cancelled, the above charges are applicable. For any cancellation of operation without pilot boarding the vessel, the charges will be calculated as follows:

Tug: Dhs. 2,300 per hour or part thereof per tug.

Pilot: Dhs. 575 per hour or part thereof.

329.4 Standby ASD Tug at anchorage area while LNG Ship to Ship (LNG-STS) operation in designated area at FOAA.

One ASD Tug upto 65 BP will remain standby during LNG STS cargo operations. The Marine Charges for one Standby ASD Tug will be AED 5,000 per hour.

329.5 LPG Ship to ship (LPG-STS) in designated area at FOAA

The Marine Charges will be Dhs. 2.35 x G.T. with minimum charge of Dhs. 100,000/-.

Maximum time allowed for STS Berthing operation is 5 hours and for STS Unberthing operation is 4 hours. Additional hours will be charged as per Port Tariff.

Note: If Pilot boarded the vessel and movements cancelled, the above charges are applicable. For any cancellation of operation without pilot boarding the vessel, the charges will be calculated as follows:

Tug: Dhs. 2,300 per hour or part thereof per tug.

Pilot: Dhs. 575 per hour or part thereof.

329.6 Standby Tug inside Port area while LPG Blending operation in designated area at FOAA

One Tug suitable to the vessel size and weather condition will remain standby inside Port area during LPG Blending operations. The Marine Charges will be on hourly basis as per conditions specified under Port Tariff item no. 327 (Immobilization).

329.7 Overstay charges for LPG STS operation in designated area at FOAA

Overstay Charges for LPG-STS operation exceeding 48 hours will be Dhs. 2,000 per hour or part thereof.

3. GENERAL PRINCIPLES

3.1 Foreword

This handbook does not overrule any General Directions, Notice to Mariners or other instructions that may be issued by The Port Authority. The Harbour Master can order the STS operation to stop at any time if it is believed that there is a risk of pollution or if the weather is forecast to deteriorate to unsafe operational levels.

Masters of vessels are to be guided by the latest SIGTTO/CDI/ICS/OCIMF STS Transfer Guide and Port Byelaws and Regulations, as well as General Directions for Navigation. The objective of this document is to ensure that all STS transfers are conducted in accordance with Port Regulations and OCIMF STS GUIDE, SIGTTO guidelines in a consistently safe and efficient manner.

3.2. Control of Operations.

The Master or other person in overall charge of the operations should be agreed and clearly established prior to the start of operations.

The actual cargo transfer operations should be carried out in accordance with the requirements of the receiving ship.

In all cases each Master remains responsible for the safety of his own ship, its crew, cargo and equipment, and shall not permit their safety to be prejudiced by the actions of the other Master, his owner, regulatory officials or others.

3.3 Manning and Duration of Operations

Each Master should take into consideration the estimated duration and the particular requirements of the operations to ensure that adequate manning requirements can be maintained throughout the operations.

3.4 Emergency Signal

A series of short rapid blasts on the ship's whistle or siren to be sounded by either ship in any emergency during the transfer operations. Emergency signals during approach or departure manoeuvres should be the signals prescribed by the International Regulations for Preventing Collisions at Sea.

3.5 Emergency Plan

For the purpose of this Guide an emergency plan is a plan agreed between both ships before the operations commence, allocating specific duties for all ship's personnel in an emergency affecting transfer operations.

3.6 Communications

3.6.1 Satisfactory Communications

Satisfactory communications between the ships are an essential requirement for successful transfer operations.

3.6.2 Language

A common language or operational vocabulary to be used in communications should be agreed, before the operations commence, to avoid misunderstanding. In this connection, attention is drawn to the Standard Marine Navigational Vocabulary, using the English language, published by the Inter-Governmental Maritime Consultative Organization (IMCO).

3.6.3 Initial Contact

The ships should establish initial contact by radio as soon as practicable to plan the transfer operations.

3.6.4 Communications during Approach, Mooring and Unmooring

Radio telephone contact should be established on VHF Channel 16 at the earliest opportunity, thereafter switching to a mutually agreed working channel. Approach, mooring and unmooring should not be attempted until fully effective communications are established. Officers responsible for mooring stations should be provided with intrinsically safe portable hand-held transceivers.

3.6.5 Communications during Transfer Operations

Essential personnel on both ships involved in the transfer operations should at all times have reliable means of communications such as intrinsically safe portable hand-held transceivers.

3.6.6 Breakdown of Communications.

A total breakdown of communications on either ship while she is manoeuvring should be indicated immediately. The approach operations should be suspended and the action taken to abort the manoeuvres should be indicated by the proper sound signals prescribed by the International Regulations for Preventing Collisions at Sea.

Should a similar failure occur during the transfer of liquefied gas the operation should be suspended. Operations should not be resumed until full communications have been re-established.

3.6.7 Radio Transmissions

The ignition of gas vapours may be possible by direct or induced radio frequency energy and no radio transmissions, other than at very high frequencies, should take place during transfer operations. Arrangements should be made with an appropriate coast station prior to the transfer operations for blind transmissions which would allow reception of urgent messages by the vessels where appropriate.

3.7. Underway Mooring and Unmooring Not Allowed

Mooring and unmooring on one ship while the other maintains steerage is not allowed.

3.8. Scope

In order to comply with internationally accepted guidelines, this manual shall be read in conjunction with OCIMF STS GUIDE and the SIGTTO guidelines as well as the Operating Regulations for the Port of Fujairah.

3.9. Document Control

This STS manual is a live document and will be reviewed in a regular basis in the light of operational experience and the regulatory environment. The latest revision will always be available on www.fujairahport.ae

4. CONDITIONS AND REQUIREMENTS

4.1 Approval from Port

The local Agent shall work closely with the Client and keep the Port Authority advised of the ETA's of ships' likely to be performing STS transfers as per our latest Notice to Mariners No. 148. An updated and confirmed ETA shall be sent 24 (twenty-four) hours prior arrival to the anchorage. If the ETA is less than 24 hours, the Gas Carrier's Master must update every 6 (six) hours.

The masters of vessels involved in liquefied gases STS operation shall submit Pre-Arrival Questionnaire for LNG/LPG Tankers calling for STS operation, *see Appendix A*. This questionnaire to be completed fully and truthfully, as well as signed and stamped by the masters.

Approval for an STS transfer will be given by the Port Authority after careful assessment of the vessels involved, weather forecasts for planned duration of operation, congestion in FOAA, other operations etc.

4.2 Responsibility

The Master and Crew of Gas Carriers shall be responsible at all times for the safety of the vessel and shall make provision to exercise prudent seamanship and all necessary precautions to maintain the integrity and efficiency of the closed cargo containment system and cargo system with which the vessel is provided.

4.3 Ship to Ship Compatibility

Each master of the vessels is planning to engage in a ship to ship (STS) transfer operation shall ensure that his vessel is compatible in design and equipment to conduct STS transfer. A compatibility assessment should be undertaken to confirm the suitability of the vessels for the planned operation and to identify any aspects that may require particular management.

STS compatibility assessments should include, but not limited to, the questionnaire in *Appendix L in* ***Ship to Ship Transfer Guide for Petroleum, Chemicals and Liquefied Gases***, developed by SIGTTO/CDI/ICS/OCIMF.

4.4. Transfer Area

STS transfers will take place at Anchorage Area "G". This area measures 1.5 by 1.5 nm, which can accommodate one STS operation.

4.5. Gas Carriers' Berthing

Pilot services for STS berthing are mandatory. According to the Port rules and regulations, tugs are used for LNG/LPG Carriers berthing and unberthing. If the vessels are of similar LOA the loaded vessel should anchor first and the ballast vessel will go alongside with the assistance of pilot and tugs.

Tug Requirements	Berthing (min)*	Unberthing (min)*	Minimum bollard pull
Vessel's length > 250m	Three (3)	Two (2)	60 tons
Vessel's length ≤ 250m	Two (2)	Two (2)	60 tons

* Number of tugs decided by pilot considering the prevailing weather condition.

4.5.1 Standby Tugs

While LNG Carriers are alongside each other, standby tug will be stationed at anchorage area "G" until the vessels are unmoored.

4.6. Environmental Conditions

When weather forecasts predict mean wind speeds above 20 knots or swell of 1.85m or more, the Harbour Master will make a decision regarding stoppage of the STS transfer operations at the anchorage area. This decision takes into account predicted wind speed and direction, moorings, ship sizes, availability of tugs etc.

However, this does not relieve ship masters involved in STS operations from their duties and responsibilities to exercise prudent seamanship and take early decision regarding the stoppage of cargo operation and unmooring of the gas carrier if need be.

At continuous wind speeds above 20 knots or swell height of 1.85m or more, the following shall be done:

- All STS mooring will be suspended
- All cargo transfer operations must be suspended

At continuous wind speeds above 25 knots or swell height of 2.75m or more, the following shall be done:

- All cargo transfer and vapour return hoses must be drained, purged and disconnected
- The double banked vessels must be unmoored

Safety factors that should be taken into account by the Masters are as follows:

- The movement of the two ships
- The behaviour and integrity of the fenders, vessel mooring failure and failure of one or more mooring between the vessels.
- Weather forecast including, but not limited to:
  - Visibility
  - Wind speed and direction
  - Wave and swell height, period and direction
- Due regard is to be paid to weather forecasts and early action taken to suspend transfers, if safe to do so, when severe weather is imminent.

Experience indicates that STS operations in locations subject to long period waves should be treated with caution. It should be expected that mooring loads will increase with wave period or as the period of wave encounter increases.

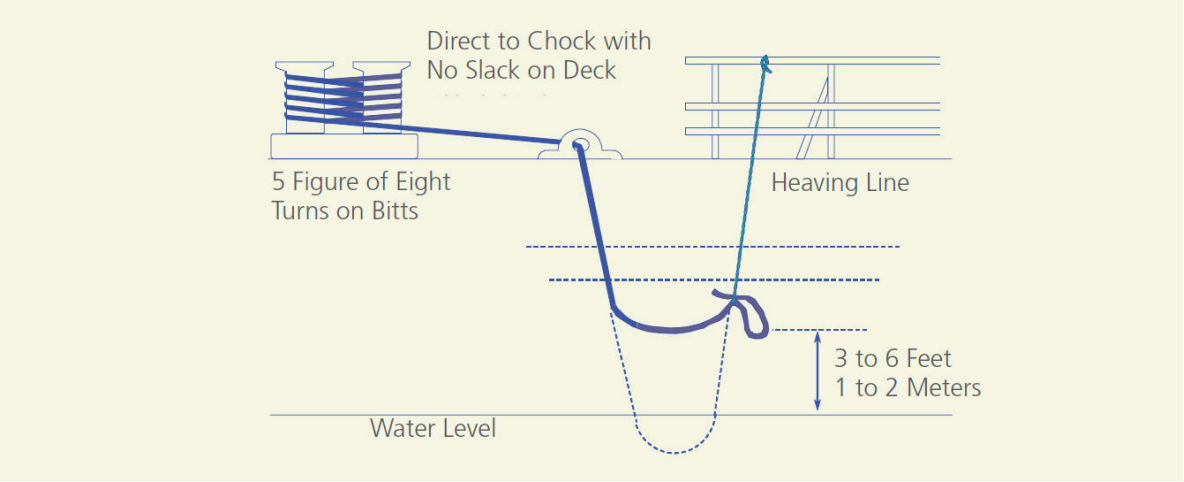
The combined effect of current and weather conditions on the yawing movements of the anchored vessel and the ultimate tension on the anchor cable should be considered.

Factors for at sea operations also include the physical sizes of the ships and their maneuvering capabilities, the speed of the approaching weather, free surface effect and sloshing limitations. In relatively heavy seas, the agitation of the cargo can increase tank pressures to unusually high levels during the STS transfer.

4.7. Emergency Towing-off Pennants

Emergency towing wires (fire wires) are required to be Correctly Rigged and Positioned, and shall be made fast to bitts as far forward and as far aft as practicable on the side of the vessel opposite to the cargo connections. The wires shall be in good condition and secured with a minimum of five figure of eight turns on the bitts.

The wire shall lead directly to the chock with no slack on deck and a heaving line made fast to the eye shall be used to maintain the eye of the wire between one and two meters above the water at all times, *see diagram below*. The wires shall be regularly checked and adjusted.



4.8. Prevention of Fatigue

Human error from fatigue is perceived to have contributed to a number of marine casualties.

Ships' crews and STS must follow the guidelines as per the relevant ILO, IMO and national regulations when planning hours of work. In this respect, it is the duty of the Master to plan rest periods accordingly, requesting additional staff when necessary.

4.9. Smoking and Naked Lights

Regulations regarding smoking and the use of naked lights should be strictly enforced by the respective Masters. Warning notices should be displayed and smoking rooms should be designated and clearly marked.

Due consideration should be given to the different sizes and configurations of vessels, particularly with regard to risks associated with the accommodation spaces of one vessel infringing on the flammable zone of another vessel.

4.10. Earths on Electrical Switchboards

If earth indicator lights are showing on the main switchboard, faults must be traced and isolated.

This is to avoid the risk of arcing, especially in deck areas where gases accumulations may be present.

4.11. Soot blowing

It is forbidden to blow tubes in FOAA and during STS transfer as per Notice to Mariners no.188. Also, Exhaust uptakes should be regularly monitored. In case of sparking from the funnel, transfer operations should be stopped immediately.

4.12. Incinerators

Incinerators should not be used during STS transfer operations.

4.13. The Use of Radar, Radio and Satellite Communication Equipment

The ships main radio transmitting aerials on both ships shall be earthed and neither ship shall use this equipment whilst alongside one another. Mobile telephones and non-intrinsically safe electrical items must not be used, or carried when switched on, on the open cargo deck. Satellite communications present no safety hazard, but must not be used if flammable gas accumulates near the antenna.

AIS equipment is considered safe and should be kept operational for the purposes of port control. However, the Very High Frequency (VHF) equipment used for the AIS broadcasts must be set to low power output during STS operations.

The use of radar involves the operation of electrical equipment, such as scanner motors, not suited for operation in a potentially hazardous area. Therefore, the radars must be switched off prior to berthing and while alongside.

4.14. Electrical Storms

When an electrical storm is present or imminent in the transfer area, the cargo transfer operation must be suspended and all vent risers, cargo system and Inert Gas Systems (IGS) secured until such time as it is considered safe to resume operations.

4.15. Galley Stoves

Before permitting the use of galley stoves and other cooking appliances while a vessel is engaged in STS operations, Master must ensure that such appliances are safe and that no danger exists.

4.16. Accommodation Openings

All access doors to the accommodation, especially those opening directly on to the cargo deck, should be kept closed during cargo transfer operations. The Master of each ship should designate those access doors that are to be used for personnel transit. Such doors, if used for personnel transit, must be closed immediately after use. Air conditioning units should be set on circulation in order to avoid the inadvertent intake of gaseous vapours. However, air conditioning must not be set to 100% recirculation, as this will cause the pressure of the internal atmosphere to fall to less than that of the external atmosphere, due to the extraction fans operating in sanitary spaces and galleys. If at any time it is suspected that gas is being drawn into the accommodation, central air conditioning and mechanical ventilation systems should be stopped and the intakes covered or closed.

4.17. Material Safety Data Sheets.

Both vessels must have copies of the Material Safety Data Sheets (MSDS) for the products being transferred. Where cargo vapours and residues are present in the receiving vessel's tanks, a copy of the previous cargo should be provided to the discharging vessel. This will enable the discharging ship's personnel to take suitable precautions in the event that the previous cargo contained toxic vapours that could be displaced onto the deck of the discharging ship or returned to the ship's tanks through vapour balancing or vapour return. Particular attention must be given to the potential of toxic substances in the cargo vapours and all necessary personal safety precautions must be taken.

Only MSDS issued by the shipper is acceptable and other generic MSDS must not be used for handling LPG/LNG cargoes.

4.18. Readiness of fire fighting equipment

Fire fighting equipment including fixed dry powder system shall be maintained on station ready for immediate use on all vessels involved in STS operations. Additional portable fire extinguishers, suitable for the product being transferred, should be placed in the manifold area. Fire monitors must be pointed towards the cargo manifold in use and left in a suitable condition for hands-off operation.

4.19. Fenders and Cargo Transfer Hoses

The master of the vessel being maneuvered alongside should be able to call upon experience when assessing fender requirements, in terms of size and number, for STS mooring and must ensure that fenders used are suitable in terms of energy absorption and result in sufficient stand-off distance such that the compressed diameter of the fenders is always sufficient to ensure that there can be no contact between ships structures through rolling during the period alongside, particularly between vessels that have relatively high freeboards.

The International Standard (ISO 17357-1:2014 and ISO 17357-2:2014) specifies the material, performance and dimensions of floating pneumatic fenders which are intended to be used for the berthing and mooring of a ship to another ship or berthing structure.

Each fender shall be certified to ISO 17357-1:2014 and ISO 17357-2:2014 or other appropriate international and national standard shall have markings on the fender body to indicate the following:

- International Standard number, and applicable year, i.e. ISO 17357-1:2014 or ISO 17357-2:2014.
- Size, diameter and length
- Initial internal pressure
- Date of manufacture or its abbreviation
- Full or abbreviated name of manufacturer
- Individual serial number
- Type of reinforcement layer

Cargo hoses shall be specially designed and constructed for the product being handled and the purpose for which they are being used. Hoses used should comply with IGC code requirements and, in addition, must comply with an appropriate international and national standards including, but not limited to, ISO 2928:2003, British Standard (BS) EN 13766:2010, BS EN 1762:2003 *for LPG cargo hoses,* as well as BS EN 1474-2 : 2008 for *LNG cargo hoses.* However, these are subject to change and the most up-to-date version must be consulted.

The hoses shall be inspected and tested at regular intervals not exceeding 6 months to prove the integrity of the hose prior use. A certificate from the certifying authority shall be available for each hose. The certifying authority shall be approved by IACS class member to engage in performing testing of LPG/LNG cargo hoses.

Each hose shall also be permanently marked with the following information in compliance with the IGC code:

- Hose serial number
- Internal diameter of the hose
- Overall weight of complete hose
- Date of manufacture
- Date of proof pressure testing
- Certifying authority stamp
- The maximum working pressure
- The maximum flow rate
- The maximum and minimum allowable working temperature range

Consideration of the need for additional support should be provided for LNG hoses.

4.20. Unauthorized Craft, Storing and bunkering operations during STS operations.

No unauthorized craft shall be allowed alongside either ship at any time prior to, during or after the STS transfer. Special attention should be focused towards the port security regulations and the International Ship and Port Facility Security Code (ISPS Code). All visitors and visiting craft must be vetted and authorized by the Ship Security Officer**.** The agent shall give prior notice and full details of any launch that is due to visit ships engaged in STS transfers.

Storing and bunkering operations are prohibited during STS cargo operations. Stores and Bunkers are only allowed:

- After disconnecting the cargo hoses,
- All blind flanges onboard are in place and fully bolted and
- If there is sufficient time left before any scheduled STS operation in "G" area.

4.21. Flags and Signals

During daylight and when within Fujairah waters, all Vessels shall fly their national flag and the national flag of the UAE. In addition, Vessels shall at all times, comply with the International Code of Signals and display flags, shapes and lights as required by the International Regulations for the Prevention of Collision at Sea.

4.22. Action in Case of Infringement of Safety and Marine Protection Regulations

In the event of a safety infringement or breach of safety and marine protection requirements during a STS transfer, the Master of either ship, are to suspend operations until the situation is rectified. The Master is also required to report to the control tower and the Harbour Master such violations, and ensure that Operations are not to resume without the unanimous agreement of the Masters and the Port Authority.

4.23. Action in case of cargo leakage

Cargo transfer shall be immediately stopped in the event of cargo leak on either vessel and shall not be resumed until the incident is investigated and the source of the leak is identified, repaired and/or the cause is isolated. In tandem, the control tower shall be informed immediately and additional approval from the Harbour Master shall be sought after the unanimous agreement of the Masters to resume cargo operation.

5. ADDITIONAL REQUIREMENTS FOR SHIP TO SHIP TRANSFERS INVOLVING LIQUEFIED GAS CARGOES

1- Safe access between the two ships shall be agreed and provided for personnel transfers.

2- Crew onboard are prohibited to use alcohol and drugs at loading and discharging operations. Persons who are intoxicated or under the influence of alcohol and/or drugs shall not be permitted to participate in the STS operations. All crew members are expected to be in a suitable mental and physical condition to perform their duties in a satisfactory manner and to be able at all times to deal with any emergency situation which may arise;

3- LNG & LPG Carriers must have a SIRE inspection carried out by oil major not more than six (6) months prior to cargo operation.

4- LNG Carriers must have a CAP rating level 2 (two) issued by an approved Classification Society, if older than twenty (20) years.

5- LNG & LPG Carriers must be entered with full Protection and Indemnity coverage with a member of the International Group of P&I Clubs.

6- LPG Carriers must have a CAP rating level 2 (two) issued by an approved Classification Society, if older than fifteen (15) years;

7- LNG & LPG Carriers must carry onboard valid statutory and class certificates as per FAL.2/Circ.127, MEPC.1/Circ.817 & MSC. 1/Circ.1462.

8- The inter-ship communication shall be established between the vessels involved in STS cargo transfer, including the SIGTTO Link.

9- Hot and Cold work is prohibited onboard while alongside the other vessel.

10- The ship's water spray system / deluge system shall be ready for immediate use.

11- The ship's fire hoses and fire-fighting equipment are positioned and ready for immediate use.

12- The cargo transfer system must be sufficiently isolated, drained and purged to allow safe removal of blank flanges prior to connection.

13- Scuppers and 'save alls' on board are effectively plugged and manifold drip trays are in position and empty or filled with water.

14- Scupper plugs that are removed temporarily shall be monitored constantly.

15- The ship's emergency fire control plans should be located externally and as closely adjacent to the gangway as possible.

16- Fixed IGS pressure and oxygen content recorders must be working properly.

17- The fixed and portable oxygen analyzers should be calibrated and working properly.
18- Nitrogen generators, if fitted, shall be operational.
19- The ship must be able to move under its own power.
20- An effective deck watch in attendance on board and adequate supervision of operations on both ships shall always be maintained during the transfer.
21- Sufficient personnel should always be on board of both ships to deal with an emergency.
22- The emergency signal and shutdown procedures to be used by both ships must be explained and understood by both parties.
23- The hazards associated with toxic substances in the cargo being handled must be identified and understood.
24- Sufficient protective clothing and equipment (including self-contained breathing apparatus) should be ready for immediate use and be suitable for the product being handled.
25- Cargo system gauges and alarms to be correctly set and in good working order.
26- Controlled tank venting of LPG or LNG cargo to atmosphere is strictly prohibited in FOAA.
27- Cargo tank relief valves should be correctly set for the cargo handled.
28- The operating parameters (opening pressure) of the pressure valves (MARV) of both ships should be exchanged and agreed.
29- High level alarms shall always be tested before the transfer takes place and operational.

30- Hand torches (flashlights) shall be of an approved type.

31- Window type air conditioning units, if fitted, must be disconnected.

32- Positive pressure should be maintained inside the accommodation.

33- For LPG cargoes, a Manufacturer's Inhibition Certificate shall be provided, where applicable.

34- The cargo handling rate should be compatible with the automatic shutdown system.

35- Hold and inter-barrier spaces are properly inerted or filled with dry air, as required.

36- All remote control valves should be in working order.

37- Re-liquefaction or Boil-off Gas (BOG) management equipment should be in good working condition.

38- The gas detection equipment shall be properly set for the cargo, calibrated and in good working condition.

39- Emergency shutdown systems shall be tested and are working properly.

40- Adequate electrical isolation measures should be in place between the two ships.

41- The two ships shall inform each other of the closing rate of ESD valves, automatic valves or similar devices.

42- Information must be exchanged between ships on the maximum/minimum temperatures/ pressures of the cargo to be handled.

43- Cargo tanks should be protected against inadvertent overfilling at all times while any cargo operations are in progress.

44- The compressor room shall be properly ventilated and the electrical motor room properly pressurized and the alarm system is in working condition.

45- The water curtain, if fitted, shall be working properly during the transfer.

46- Airlock entrance to the electric motor room shall be fitted with self-closing doors and audible and visual alarms shall be working properly.

47- Impressed current cathodic protection system, if fitted, to be switched off at least three hours before transfer.

6. Pre-Arrival Questionnaire

PRE-ARRIVAL QUESTIONNAIRE		
Vessel Name / previous Name(s) and date(s) of change:		
IMO Number/ Call Sign		
Port of Registry / IACS Class		
Year of Built		
Type of Tanker: LPG/LNG		
Type of Cargo Tank : Spherical / Membrane		
LOA / Extreme breadth (m)		
Parallel Body Length (Ballast/Tropical Loaded Condition)		
Draught:		
Summer/Tropical		
Arrival Draught (Fwd/Mid/Aft)		
Maximum trim expected during operations		
Departure Draught (Fwd/Mid/Aft)		
Tonnage: NT		
GT		
Displacement (MT): Light		
Loaded		
Arrival		
Departure		

Dead Weight (MT):	
Summer	
Tropical	
Manifolds:	
Size (mm/inch) / Number	
Size (mm/inch) / Number	
Distance between center of manifolds (m)	
Height of centre of manifold from the save all/drip tray grating	
Height of centre of manifold above waterline (Ballast/Loaded)	
Extreme height of the centre of manifold above waterline (During operations)	
Distance inboard from manifold to ship's side/rail	
Distance bow to manifold & manifold to stern	
The vessel is compatible with the other vessel engaged in STS Transfer	YES ☐ NO ☐
Confirm Inert gas system fitted and operational	YES ☐ NO ☐
Confirm Nitrogen generator fitted and operational	YES ☐ NO ☐
Vessel Condition: Ballast /Loaded / Part Loaded	
If Loaded, type and quantity of cargo on board in MT/CBM	
Type and quantity of cargo to be discharged/ loaded in MT/CBM	
- Discharge	
- Load	

Toxic Component which exceeds the international allowed Thresholds:		
-Flash Point		
-Stowed cargo temperature (Multi level/Average)		
Arrival cargo tank pressure		
Relief Valves settings for each tank		
Maximum Load/ Discharge capacity in cubic meter/hour/line		
Maximum acceptable pressure at ship's Manifolds (Bar)		
Mooring type, size and number and the SWL: (mm/MT)		
Details and deficiencies in the ship's mooring arrangement that could affect the safety of mooring		
Last SIRE/CDI inspection:		
-Date / Issuing Authority		
Last PSC inspection:		
-Date/ Place / MOU		
Security Level		
Last Port of Call		
Next Port of Call		
Does the carrier has a CAP rating level 2 (two) issued by an approved Classification Society, if older than twenty (20) years (applicable to LNG carriers)?	YES ☐	NO ☐
Does the carrier has entered with full Protection and Indemnity coverage with a member of the International Group of P&I Clubs ?	YES ☐	NO ☐
Does the carrier has a CAP rating level 2 (two) issued by an approved Classification Society, if older than fifteen (15) years (applicable to LPG)?	YES ☐	NO ☐
Does the carrier has onboard valid statutory and class certificates as per FAL.2/Circ.127, MEPC.1/Circ.817 & MSC. 1/Circ.1462.	YES ☐	NO ☐

7. References

1. OCIMF
2. SIGTTO
3. S.T.S Transfer Guide (Liquefied Gases).

Regards,

Capt. Tamer Masoud
HARBOUR MASTER.