SSSCL Section – Checks Pre-transfer (including agreements)

- Tanker and Terminal both complete part 5A (additionally 5B for Bulk Liquid Chemicals and 5C for Liquefied Gases).
- Tanker and Terminal should discuss and agree the content of part 6 (Agreements).
- Tanker complete additional pre-transfer checks in part 7A. If COW is planned, they complete part 7B. Any intention for tank cleaning and/or gas freeing alongside should be agreed with Terminal and Tanker complete part 7C.
- The declaration – When completed, each separate checklist part checked off & initialed by Tanker & Terminal

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SSSCL Section – Checks Pre-transfer (including agreements)

Additional for chemical tankers **Checks pre-transfer**

Part 5B. Tanker and terminal: bulk liquid chemicals. Checks pre-transfer

Item	Check	Tanker status	Terminal status	Remarks
61	Inhibition certificate received (if required) from manufacturer	Yes	Yes	
62	Appropriate personal protective equipment identified and available (4.8.1)	Yes	Yes	
63	Countermeasures against personal contact with cargo are agreed (1.4)	Yes	Yes	
64	Cargo handling rate and relationship with valve closure times and automatic shutdown systems is agreed (16.8, 21.4, 21.5, 21.6)	Yes	Yes	
65	Cargo system gauge operation and alarm set points are confirmed (12.1.6.6.1)	Yes	Yes	

Part 7A. General tanker: checks pre-transfer

Item	Check	Status	Remarks
84	Portable drip trays are correctly positioned and empty (23.7.5)	Yes	
85	Individual cargo tank inert gas supply valves are secured for cargo plan (12.1.13.4)	Yes	
86	Inert gas system delivering inert gas with oxygen content not more than 5% (11.1.3)	Yes	
87	Cargo tank high level alarms are operational (12.1.6.6.1)	Yes	
88	All cargo, ballast and bunker tanks openings are secured (23.3)	Yes	

Part 5A. Tanker and terminal: pre-transfer conference

Item	Check	Tanker status	Terminal status	Remarks
32	Tanker is ready to move at agreed notice period (9.11, 21.7.1.1, 22.5.4)	Yes	Yes	
33	Effective tanker and terminal communications are established (21.1.1, 21.1.2)	Yes	Yes	
34	Transfer equipment is in safe condition (isolated, drained and de-pressurised) (18.4.1)	Yes	Yes	
35	Operation supervision and watchkeeping is adequate (7.9, 23.11)	Yes	Yes	
36	There are sufficient personnel to deal with an emergency (9.11.2.2, 23.11)	Yes	Yes	
37	Smoking restrictions and designated smoking areas are established (4.10, 23.10)	Yes	Yes	
38	Naked light restrictions are established (4.10.1)	Yes	Yes	
39	Control of electrical and electronic devices is agreed (4.11, 4.12)	Yes	Yes	
40	Means of emergency escape from both tanker and terminal are established (20.5)	Yes	Yes	
41	Firefighting equipment is ready for use (5, 19.4, 23.8)	Yes	Yes	
42	Oil spill clean-up material is available (20.4)	Yes	Yes	
43	Manifolds are properly connected (23.6.1)	Yes	Yes	
44	Sampling and gauging protocols are agreed (23.5.3.2, 23.7.7.5)	Yes	Yes	
45	Procedures for cargo, bunkers and ballast handling operations are agreed (21.4, 21.5, 21.6)	Yes	Yes	
46	Cargo transfer management controls are agreed (12.1)	Yes	Yes	
47	Cargo tank cleaning requirements, including crude oil washing, are agreed (12.3, 12.5, 21.4.1)	Yes	Yes	See also parts 7B/7C as applicable

Part 6. Tanker and terminal: agreements pre-transfer

Part 5 item	Agreement	Details	Tanker initials	Terminal initials
32	Tanker manoeuvring readiness	Notice period (maximum) for full readiness to manoeuvre: Period of disablement (if permitted):		
33	Security protocols	Security level: Local requirements:		
33	Effective tanker/terminal communications	Primary system: Backup system:		
35	Operational supervision and watchkeeping	Tanker: Terminal:		
37 38	Dedicated smoking areas and naked lights restrictions	Tanker: Terminal:		
45	Maximum wind, current and sea/swell criteria or other environmental factors	Stop cargo transfer: Disconnect: Unberth:		
45 46	Limits for cargo, bunkers and ballast handling	Maximum transfer rates: Topping-off rates: Maximum manifold pressure: Cargo temperature: Other limitations:		

Part 5A. Tanker and terminal: pre-transfer conference

32. Tanker is ready to move at agreed notice period (9.11, 21.7.1.1, 22.5.4)

- While a tanker is moored at a terminal its boilers, main engines, steering machinery and other equipment essential for manoeuvring should be kept ready so that the ship can move away from the berth in an emergency.

Part 5A. Tanker and terminal: pre-transfer conference

33. Effective tanker and terminal communications are established (21.1.1, 21.1.2)

- To ensure operations are safely controlled, both parties are responsible for establishing, agreeing in writing and maintaining a reliable communications system. Exchange information in English and/or the common working language. Emergency signals, and any other necessary signals, should be agreed.
- The terminal is responsible for providing the means of communication, including a backup system.

Part 5A. Tanker and terminal: pre-transfer conference

34. Transfer equipment is in safe condition (isolated, drained and de-pressurised) (18.4.1)

- Terminals should have adequate provisions for the clearing of MLAs and hoses. A documented operating procedure should be in place.

Part 5A. Tanker and terminal: pre-transfer conference

35. Operation supervision and watchkeeping is adequate (7.9, 23.11)

- The level of manning should ensure that all operations related to the tanker/terminal interface are carried out safely. Shore Officer should get the Crew List from vessel and verbally confirm the number of personnel per shift.

Part 5A. Tanker and terminal: pre-transfer conference

36. There are sufficient personnel to deal with an emergency

(9.11.2.2, 23.11)

- Manning levels should ensure that emergency situations and security can be managed at all times during the tanker's stay at a terminal.

Part 5A. Tanker and terminal: pre-transfer conference

37. Smoking restrictions and designated smoking areas are established (4.10, 23.10)

- Smoking in port should only be permitted under controlled conditions and in designated smoking areas.

Part 5A. Tanker and terminal: pre-transfer conference

38. Naked light restrictions are established (4.10.1)

- Naked lights should be prohibited on the tanker deck, in the terminal and in any other place where flammable gas may be present.
- A naked light or open fire comprises the following: flame, spark formation, naked electric light or any surface with
- a temperature that is equal to or higher than the auto-ignition temperature of the products handled in the operation.

Part 5A. Tanker and terminal: pre-transfer conference

39. Control of electrical and electronic devices is agreed (4.11, 4.12)

- Hazardous areas are normally subdivided into zones according to the likelihood of a flammable atmosphere being present. Zone 0/1/2 at terminal.

Part 5A. Tanker and terminal: pre-transfer conference

40. Means of emergency escape from both tanker and terminal are established (20.5)

The main focus in the event of a fire, explosion or other emergency at a terminal will be the safety of personnel and how they can be safely evacuated. Terminal facilities and sea island structures should have emergency muster locations clearly marked and there should be at least two different evacuation routes from all occupied or work areas and from berthed tankers.

Part 5A. Tanker and terminal: pre-transfer conference

41. Firefighting equipment is ready for use (5, 19.4, 23.8)

When a tanker is alongside a berth, firefighting equipment on the tanker and terminal is to be ready for immediate use. On board the ship, this is normally achieved by having fire hoses with jet/spray nozzles connected and run out forward and aft of, and adjacent to, the manifold that is in use. In addition, those immediately F & A of manifold should also be left positioned so as to point towards the manifold area. Having a portable dry chemical powder extinguisher available near the manifold provides additional protection against flash fires. On the jetty, firefighting equipment should be ready for immediate use. Consideration should be given to having portable extinguishers available for use adjacent to the jetty manifold area. Fixed firefighting systems should be capable of full operation within the first five minutes of a fire.

Part 5A. Tanker and terminal: pre-transfer conference

Part 5A. Tanker and terminal: pre-transfer conference

42. Oil spill clean-up material is available (20.4)

- Each terminal should have an approved spill response plan. Tier 1 Oil spill clean-up material
- to be ready for immediate use.

Part 5A. Tanker and terminal: pre-transfer conference

43. Manifolds are properly connected (23.6.1)

- The tanker and terminal are jointly responsible for ensuring that presentation flange faces are clean and in good condition. Where bolted connections are used they must be fully secured with all available bolts. Terminal and tanker should exchange details of the connection system to ensure the:
- Tanker manifold flange is compatible with the proposed QC/DC system connection.
- System integrity is on the same level as a fully bolted connection.
- Tanker or terminal personnel responsible for the connection and disconnection are clearly defined.

Part 5A. Tanker and terminal: pre-transfer conference

44. Sampling and gauging protocols are agreed (23.5.3.2, 23.7.7.5)

- In general, there are three main methods of gauging closed, open and restricted. Avoid escaping vapour and wear proper PPE if risk of gas exposure exists. Stand at right angles to the direction of the wind. Depending on the cargo, consider using appropriate RPE. If open sampling is needed, it should be done according to the operator's SMS and agreed by the Master and the Terminal Representative. Before Ullaging and Sampling non-inerted tanks, any metallic components should be securely bonded together and to the tank before the device is introduced and should remain earthed until after removal.

Part 5A. Tanker and terminal: pre-transfer conference

45. Procedures for cargo, bunkers and ballast handling operations are agreed (21.4, 21.5, 21.6)

- Safe and efficient cargo, ballast and bunkering operations depend on effective cooperation and coordination between all the parties involved.

Part 5A. Tanker and terminal: pre-transfer conference

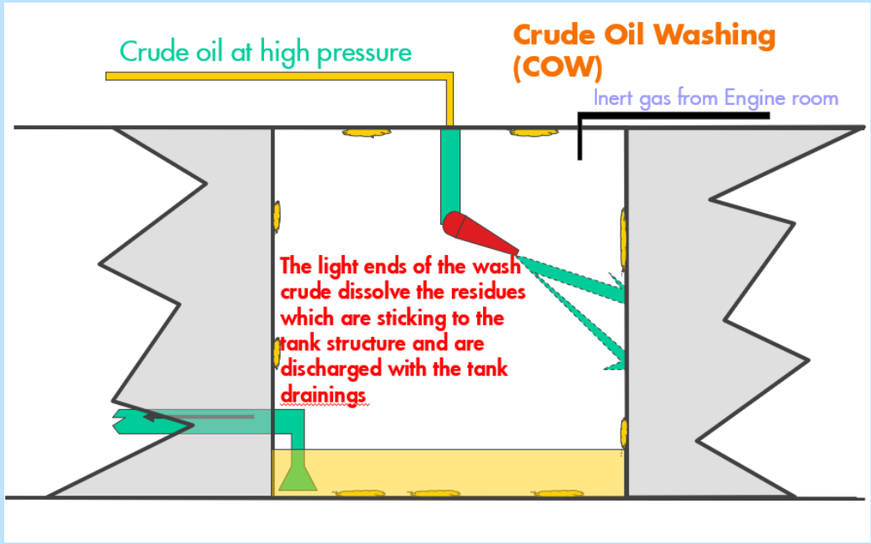
46. Cargo transfer management controls are agreed (12.1)

- All cargo operations should be carefully planned and documented well in advance. The plans should be discussed with all personnel on the ship and at the terminal and may require modification after this consultation.

Part 5A. Tanker and terminal: pre-transfer conference

47. Cargo tank cleaning requirements, including crude oil washing, are agreed (12.3, 12.5, 21.4.1)

- When COW is needed during cargo discharge, the Master should inform the terminal (or other ship during STS
- transfer) at least 24 hours in advance, or in such time as required by the terminal. COW should only proceed
- when they give their written approval. Only fixed tank washing machines may be used for COW and oxygen
- content of the tank must not exceed 8% by volume.



Part 5A. Tanker and terminal: pre-transfer conference

48. Cargo tank gas freeing arrangements agreed (12.4) See also part 7C

- The cargo vapours displaced during gas freeing are highly flammable, so good planning and firm overall control are essential. Regional and local regulations may prohibit the release of cargo vapours when in coastal or port areas. To be gas free for entry without breathing apparatus, a tank or space should be ventilated until tests confirm that the concentration of hydrocarbon gas throughout the compartment is less than 1% of the LFL and that the oxygen content is 21% by volume. Toxic gases should also be tested and confirmed at acceptable levels.

Part 5A. Tanker and terminal: pre-transfer conference

48. Cargo and bunker slop handling requirements agreed

(12.1, 21.2, 21.4) See also part 7C

Part 5A. Tanker and terminal: pre-transfer conference

50. Routine for regular checks on cargo transferred are agreed (23.7.2)

- At the pre-transfer conference, the tanker and terminal representatives should agree to regularly check: Pressures & Cargo Quantity. Tank ullages should
- be checked at least hourly and a loading rate calculated. Cargo figures and rates should be compared with shore figures to identify any discrepancy. Stop the cargo transfer for an unexpected change in pressures, or a marked discrepancy between the tanker and terminal calculations of quantities transferred, until the reason for any differences have been identified. The transfer should resume only with the agreement of all parties. Regular checks on pipelines and terminal connections: visual checks by operator/CCTV as per local procedure.

Part 5A. Tanker and terminal: pre-transfer conference

51. Emergency signals and shutdown procedures are agreed (12.1.6.3, 18.5, 21.1.2)

ExxonMobil

Product Name: TOYOTA GENUINE DIFFERENTIAL GEAR OIL LT 75W-85
Revision Date: 04 Jul 2011
Page 1 of 12

SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT
Product Name: TOYOTA GENUINE DIFFERENTIAL GEAR OIL LT 75W-85
Product Description: Base Oil and Additives
Product Code: 202030108012, 550041-60
Recommended Use: Gear oil

COMPANY IDENTIFICATION
Supplier: EMG Marketing Godo Kaisha
Lubricants & Specialties
M Building
1-8-15, Kohnan, Minato-ku
Tokyo 108-0075 Japan

Supplier General Contact 0120-019-313

SECTION 2 HAZARDS IDENTIFICATION

This material is not hazardous according to regulatory guidelines (see 29 CFR Section 15).

Contains: PHOSPHORIC ACID ESTERS, AMINE SALT, OLEFIN SULFIDE. May produce an allergic reaction.

Other hazard information:

PHYSICAL / CHEMICAL HAZARDS
No significant hazards.

HEALTH HAZARDS
High-pressure injection under skin may cause serious damage. Excessive exposure may result in eye, skin, or respiratory irritation.

ENVIRONMENTAL HAZARDS
No significant hazards.

- The ship and the terminal should have agreed an Emergency Shutdown (ESD) procedure and alarm and recorded it for circumstances when operations should stop immediately.

Part 5A. Tanker and terminal: pre-transfer conference

5.2 Safety data sheets are available (1.4.4, 20.1, 21.4)

- SDS should be available to provide procedures for handling or working with each particular product. It should include details of physical data (e.g. melting point, boiling point, flashpoint), toxicity, health effects, first aid, reactivity, storage, disposal and the PPE required

Part 5A. Tanker and terminal: pre-transfer conference

53. Hazardous properties of the products to be transferred are discussed (1.2, 1.4)

- An SDS does not guarantee that all the hazardous or toxic components have been identified or documented. Tanker and terminal operators should have procedures and equipment to verify the actual levels of toxic components present in cargoes and/or bunkers.
- Loading rate 1m/sec at the tank inlet for the initial loading of static accumulator cargoes into non-inerted tanks.

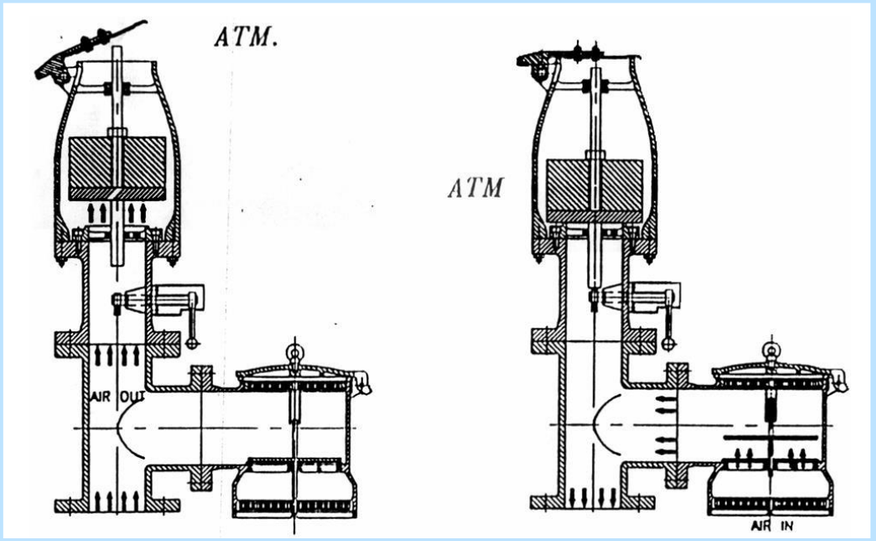
Part 5A. Tanker and terminal: pre-transfer conference

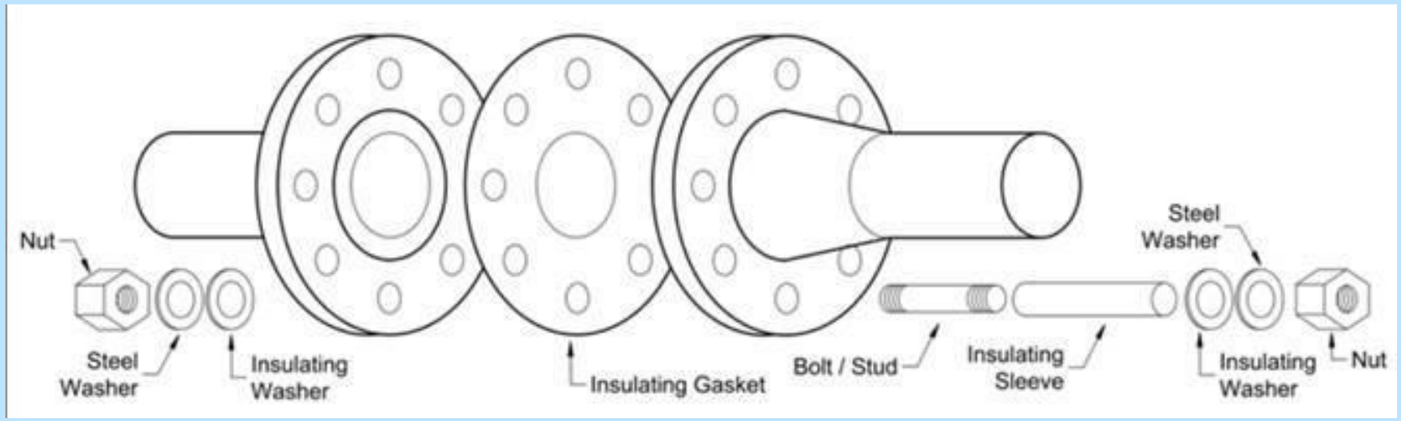
54. Electrical insulation of the tanker/terminal interface is effective (12.9.5, 17.4, 18.2.14)

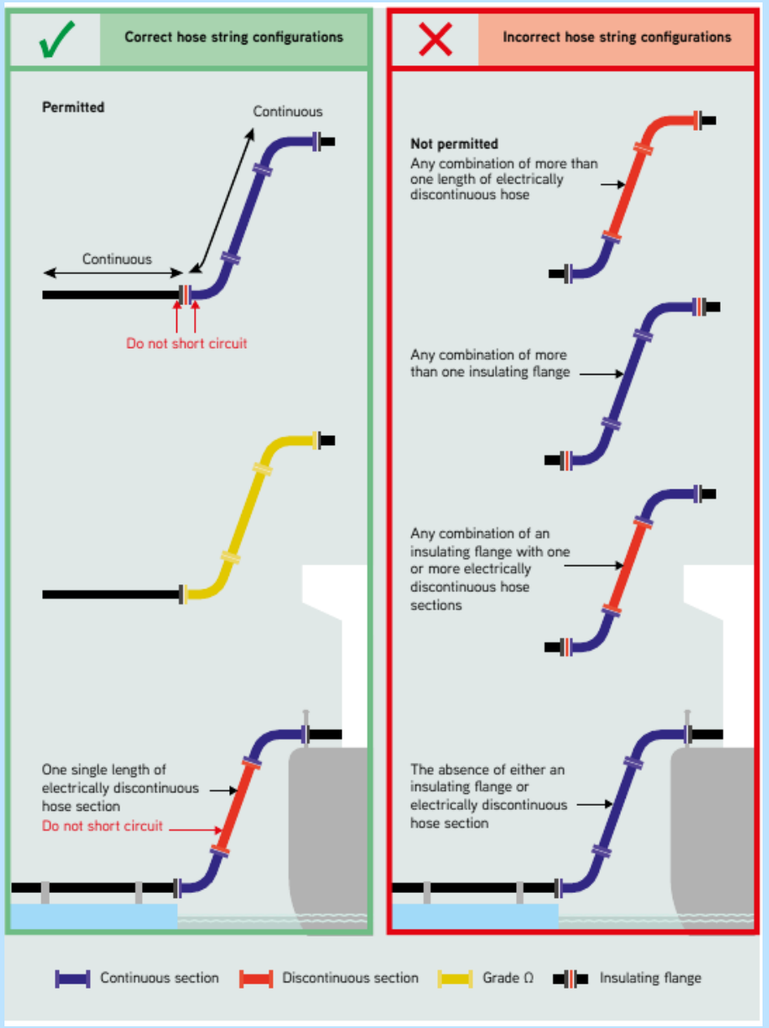
- To protect against the risk of Electric arcing due to possible differences in electrical potential between the tanker and the berth,
- there should be a means of electrical discontinuity at the tanker/terminal interface
- Insulating flange or single length of discontinuous hose

Part 5A. Tanker and terminal: pre-transfer conference

54. Electrical insulation of the tanker/terminal interface is effective (12.9.5, 17.4, 18.2.14)







Part 5A. Tanker and terminal: pre-transfer conference

55. Tank venting system and closed operation procedures are agreed

(11.3.3.1, 21.4, 21.5, 23.3.3)

- Venting capacity is based on the maximum volume of cargo entering a tank, plus a 25% margin for gas evolution (vapour growth). The cargo tank venting system should be set for the operation concerned. High velocity vents should be set in the position to ensure the high exit velocity of vented gas. The Master shall provide the terminal with information on maximum loading rates for each cargo and ballast tank and, where tanks have a combined venting system, for each group of cargo or ballast tanks.

Part 5A. Tanker and terminal: pre-transfer conference

56. Vapour return line operational parameters are agreed (11.5, 18.3, 23.7.7)

- The terminal's operating manual should include a full description of the system and the requirements for its safe operation. TIB should also include
- details of the vapour recovery system. Tanker and terminal personnel should be aware of any constraints associated with the operation of the VECS during the pre-transfer conference.

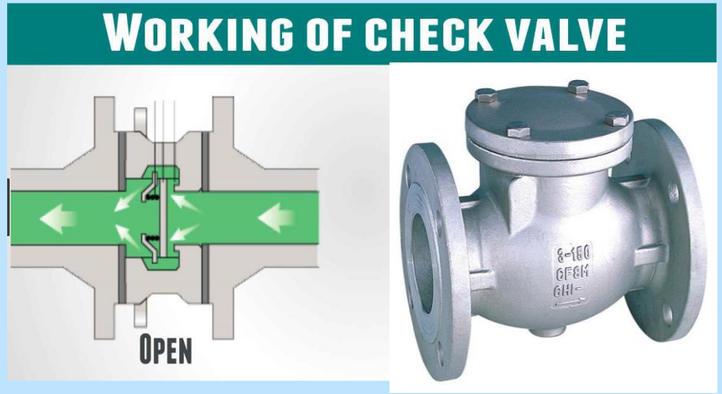
Part 5A. Tanker and terminal: pre-transfer conference

57. Measures to avoid back-filling are agreed (12.1.13.7)

- The ship should be informed when the shore tanks are higher than the ship's manifold and whether NRVs are fitted. Before the ship's manifold valves are opened, shore valves should be fully open to receiving tanks. The tanker's manifold valves should not be opened until the pumps have developed enough
- pressure to prevent backflow. Start the discharge at a slow rate and only increase it to the agreed rate once both parties are satisfied that the flow of oil to and from the designated tanks is confirmed.

Part 5A. Tanker and terminal: pre-transfer conference

58. Status of unused cargo and bunker connections is satisfactory (23.7.1, 23.7.6)



- Valve tightness should not be relied on to stop the escape or seepage of oil. All terminal pipelines, MLAs and hoses
- not in use at a berth should be securely blanked. All the tanker's cargo and bunker pipelines not in use should be
- securely blanked at the manifold. The cargo transfer system should be checked at the start of cargo transfer and at
- Agreed intervals. This should include tanker outboard manifolds, pipelines, MLAs, cargo hoses, unused connections,
- blanks, valves and waterside checks.

Part 5A. Tanker and terminal: pre-transfer conference

59. Portable very high frequency and ultra high frequency radios are intrinsically safe (4.12.4, 21.1.1)

- Handheld Very High Frequency/Ultra High Frequency (VHF/UHF) portable transceivers should be intrinsically safe.
- The terminal is responsible for providing the means of communication, including a backup system. The system of communication and channels to be used should be agreed and documented during the pre-transfer conference.

Part 5A. Tanker and terminal: pre-transfer conference

60. Procedures for receiving nitrogen from terminal to cargo tank are agreed (12.1.14.8)

- If shore supplied nitrogen is used, e.g. to purge tanks, for padding cargo or to clear lines, be aware that this may be at HP (up to ten bar) and at a high flow rate, making it potentially hazardous because of the risk of over pressurising the cargo tanks. Carry out a risk assessment: the operation should only proceed if appropriate risk mitigations are in place.

Part 5B. Tanker and terminal: Bulk Liquid Chemicals

Additional for chemical tankers Checks pre-transfer

Part 5B. Tanker and terminal: bulk liquid chemicals. Checks pre-transfer				
Item	Check	Tanker status	Terminal status	Remarks
61	Inhibition certificate received (if required) from manufacturer	Yes	Yes	
62	Appropriate personal protective equipment identified and available (4.8.1)	Yes	Yes	
63	Countermeasures against personal contact with cargo are agreed (1.4)	Yes	Yes	
64	Cargo handling rate and relationship with valve closure times and automatic shutdown systems is agreed (16.8, 21.4, 21.5, 21.6)	Yes	Yes	
65	Cargo system gauge operation and alarm set points are confirmed (12.1.6.6.1)	Yes	Yes	

Part 5B. Tanker and terminal: bulk liquid chemicals. Checks pre-transfer (cont.)				
Item	Check	Tanker status	Terminal status	Remarks
66	Adequate portable vapour detection instruments are in use (2.4)	Yes	Yes	
67	Information on firefighting media and procedures is exchanged (5, 19)	Yes	Yes	
68	Transfer hoses confirmed suitable for the product being handled (18.2)	Yes	Yes	
69	Confirm cargo handling is only by a permanent installed pipeline system	Yes	Yes	
70	Procedures are in place to receive nitrogen from the terminal for inerting or purging (12.1.14.8)	Yes	Yes	

If bulk chemicals are to be transferred, the tanker and terminal personnel should also complete the additional part 5B as part of the pre-transfer conference, and each should retain a copy

- 4.8.1 Personal Protective Equipment: Identify what protective clothing and equipment.
- 12.1.6.6.1 Risk of overfilling:

  Loading a cargo tank under normal closed conditions comes with a risk of overfilling. The reliance on closed gauging systems means it is important they are fully operational and an independent overfill alarm arrangement should provide backup.
- 12.1.14.8 Receiving nitrogen from shore:

  Attempting to throttle a gas flow with a ship's manifold valve designed to control liquid flow is inappropriate. However, the manifold may be used as a rapid safety stop in an emergency. Note that the effect of a pressure surge in a gas is not as violent as in a liquid.

Part 5C. Tanker and terminal: Liquefied Gas

Additional for gas tankers **Checks pre-transfer**

Part 5C. Tanker and terminal: liquefied gas. Checks pre-transfer				
Item	**Check**	**Tanker status**	**Terminal status**	**Remarks**
71	Inhibition certificate received (if required) from manufacturer	Yes	Yes	
72	Water spray system is operational (5.3.1, 19.4.3)	Yes	Yes	
73	Appropriate personal protective equipment is identified and available (4.8.1)	Yes	Yes	
74	Remote control valves are operational	Yes	Yes	
75	Cargo pumps and compressors are operational	Yes	Yes	
76	Maximum working pressures are agreed between tanker and terminal (21.4, 21.5, 21.6)	Yes	Yes	
77	Reliquefaction or boil-off control equipment is operational	Yes	Yes	
78	Gas detection equipment is appropriately set for the cargo (2.4)	Yes	Yes	
79	Cargo system gauge operation and alarm set points are confirmed (12.1.6.6.1)	Yes	Yes	
80	Emergency shutdown systems are tested and operational (18.5)	Yes	Yes	
81	Cargo handling rate and relationship with valve closure times and automatic shutdown systems is agreed (16.8, 21.4, 21.5, 21.6)	Yes	Yes	
82	Maximum/minimum temperatures/pressures of the cargo to be transferred are agreed (21.4, 21.5, 21.6)	Yes	Yes	
83	Cargo tank relief valve settings are confirmed (12.11, 21.2, 21.4)	Yes	Yes	

21.5 Agreed loading plan

On the basis of the information exchanged, the Responsible Officer and Terminal Representative should draw up a written operational agreement that covers:

Operation related:

- Cargo distribution on arrival and departure.
- For each product: Quantity; Tanker's tanks to be loaded; Shore tanks; Lines to be used tanker/terminal.
- Cargo transfer rate; Operating pressure; Maximum allowable pressure; Temperature limits.Venting system.
- Sampling and gauging procedures.

This agreement should include a loading plan that indicates the expected timing and covers: the cargo to be loaded Loading rates; Atmospheric conditions, including wind speed;· Bunkering or storing operations; Emergency stop procedure.