



Jetty Information Booklet



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1. Welcome to PT. Orbit Terminal Merak (PT. OTM) d/h PT. Oiltanking Merak

We are an independent storage terminal for liquid bulk, located on the Merak - Banten, Indonesia. We store products for a wide range of customers; the variety of products stored being market-related. Our most important product groups are Petroleum Products and Bio fuels.

Our address is:

PT. OTM

Jl. Yos Sudarso Kel. Lebak Gede, Kec. Pulo Merak
Cilegon – Banten, Indonesia

Tel.: +62 254 572740

Fax: +62 254 572739

The contact partner for all items related to Maritime Security as well as permitting is the HSSE Coordinator (Tel: +62 254 572740 ext. 118.) or Control Room (Tel: +62 254 572740 ext. 116).

The Jetty Information Booklet was prepared to make ship crews familiar with our facility in order to maintain a safe work environment. This document contains general Health, Safety, Security and Environment information, basic rules of behaviour, instructions for emergency situations, relevant terminal regulations and information for safe and efficient operations while a vessel is alongside the berth. Therefore, irrespective of the permits required, everybody entering the terminal for the first time is obliged to make himself/herself familiar with this booklet.

For emergency situations the facility is provided with emergency alarm points, fire extinguishers, terminal telephone (116 for control room), terminal radios and VHF. They are clearly marked and ship crew members must identify the nearest location before starting their operation. For orientation please refer to the map included.

It is the obligation of all persons entering the terminal to protect the environment by preventing contamination of soil, water or the atmosphere. Visits to our facility are made at one's own risk. OTM is not responsible for any damage, loss or injury which may occur during the stay on our property.

Please be informed that PT. OTM has the right to reject a nominated vessel on arrival if serious deficiencies are noted on board.

Please do not hesitate to contact the Terminal Management on any query you may still have after reading this booklet or regarding other items not included in this booklet.

Terminal Management
PT. Orbit Terminal Merak

2. Terminal Regulations

2.1 Ships Responsibilities

Responsibility of the Master

The Master of a seagoing vessel or the Master of an inland vessel (hereinafter "The Master") should take care that he and all other persons on board whilst on board of the ship as well as on the installation carefully follow all rules, regulations, formalities, measures and directions given and/or to be given by or on behalf of the authorities and/or PT. OTM. The Master should take care that all agreements made between PT. OTM and persons on board of the ship are carefully observed. All operations on board the ship relative to the ship and/or the cargo are to be executed under surveillance of the Master, also if such operations are carried out by personnel of PT. OTM.

Ban on fire and smoking

The use of open fire - which includes welding, smoking, use of matches, lighters and non-officially approved illumination - is forbidden under all circumstances on board the ship as well as on the installation, in the open air or in enclosed areas where the construction or the ventilation system does not give protection against penetration of inflammable gases.

Water pollution

Unless officially approved, it is forbidden to allow the discharge of substances, in any way or for any reason including overfilling, on the installation or into the water.

Commencement and progress of operations

When the installation has declared itself ready for delivery respectively receipt of the cargo, the loading respectively discharging of the ship shall commence and continue non-stop, irrespective of day and night, Sundays and holidays included (provided permission has been granted by the authorities), until the complete cargo has been loaded respectively discharged. During this period, the Master shall ensure that the ship receives respectively discharges the cargo without interruption and/or delay, with due observance of the relative agreements made with PT. OTM, and with observance of regulations and rules applicable to the cargo and the installation in question.

Leaving the berth

The Master is bound to leave the berth as soon as possible, after termination of loading respectively discharging. PT. OTM has the right to demand that the ship be removed from its berth when PT. OTM deems this necessary for reasons of safety, compliance with safety regulations and/or directions from the harbour authorities or other authorities, the smooth continuation of activities or for any other valid reason. Likewise, PT. OTM has the right to demand that the ship, which has taken berth alongside an assigned mooring and which, in spite of the installation's readiness, is not able to or - for whatever reason - does not commence loading respectively discharging cargo, or which discontinues any of these activities for more than 6 hours, clears its berth instantly. If the ship does not clear its berth on first request from PT. OTM, then PT. OTM has the right to shift (have shifted) or to remove (have removed) the ship for account and risk of the Master and the owner of the ship.

Availability of berth

PT. OTM shall not be liable for any damage, demurrage or other costs incurred by the ship, as a result of the fact that the ship has had to wait due to the mooring not being available, attainable or serviceable, whether or not prior reservations were made or the ship's expected arrival time was announced or as a result of a deviation from the order of sequence in which ships are being dealt with. Neither is PT. OTM liable for damage, demurrage or other disadvantage incurred by the ship, which has taken mooring at the assigned mooring facilities, as a result of the installation not being ready for delivery respectively receipt of cargo due to delay or discontinuation of loading or discharging.

Direct transfer from ship to ship

For any manipulation of goods which is to take place between the ship and any other vessel, prior permission from PT. OTM is required. Even if PT. OTM has allowed such transfer, it will take place under the Master's responsibility and for account and risk of the Master and the owner of the ship and not for account and risk of PT. OTM.

Entering PT. OTM's premises

Ship crew members being present on the installation as well as those who enter the installation on request of the Master and/or the ship crew members, do so entirely at their own risk, also when this happens with permission of or under escort by PT. OTM. PT. OTM is never liable for death, injury, damage, loss, fines, costs or other harm incurred by those who set foot on the installation. This section also applies to vehicles with which crew or other persons coming from or going to a ship find themselves on the installation. The Basic Safety Rules (see chapter 0) have to be adhered to when entering the terminal premises.

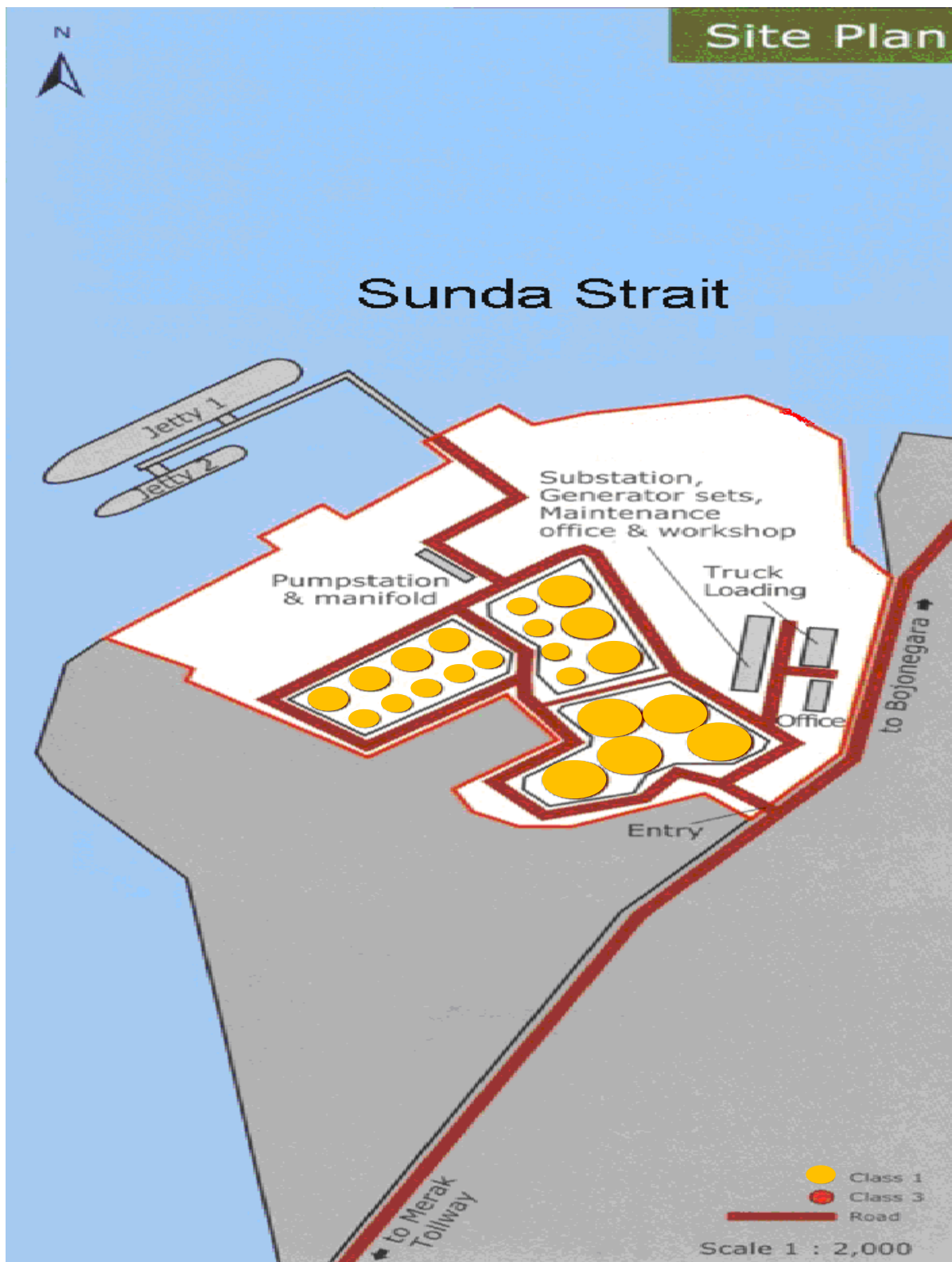
2.2 Basic Safety Rules

When entering PT. OTM's premises the following rules apply:

- Smoking is prohibited.
- It is prohibited to carry sources of ignition (e.g. lighters, matches) at all times.
- Use of non spark-/explosion-proof equipment (e.g. mobile phones, radios, cameras, calculators, battery-powered hearing devices) is only allowed by special permission from the management.
- The minimum personal protective equipment (PPE) consisting of safety helmet, footwear (anti-static safety shoes with product resistant soles) and protective clothing (antistatic, long-sleeve) must be worn at all times.
- Where indicated through signposting or required by a Work Permit, additional PPE (e.g. eye and ear protection) requirements shall be met as well.
- It is forbidden to possess or consume alcohol, drugs or other intoxicants on the site or to be under their influence.
- It is not allowed to drink or eat during work or in tank pits, pump stations, manifolds, loading racks or jetties.
- Garbage and waste must be collected and disposed of in dedicated containers.
- Drivers of all vehicles must obey traffic signs and regulations.
- The general speed limit of 20 km/h must be observed.
- Handrails and walkways must be used where provided.
- All accidents, injuries, incidents or near misses must be reported to the shift leader, control room or the HSSE Department.
- Instructions of PT. OTM personnel must be followed at all times.

No open fire	No smoking	No cell phones	No cameras	No entry
				
Wear safety helmet	Wear antistatic safety shoes	Clothing must cover arms and legs	No drinking or eating	Speed limit (km/h)
				

3. Terminal Map



4. Jetty Information, Vessel Acceptance Criteria & Tug Requirement

4.1 Jetty Information

Jetty No.	Depth Alongside [m]	Depth Approaches [m]	Berthing		Anchorage Area*	
			Velocity [m/s]	Position	Position	
1	21,0	20.5	0,11	05° 54' 36.41" S ; 106° 00' 05.16" E	05° 53' 18" S ; 105° 59' 24" E	05° 52' 24" S ; 106° 00' 24" E
2	20,0	19.5	0,20	05° 54' 39.17" S ; 106° 00' 04.16" E	05° 53' 24" S ; 106° 01' 00" E	05° 54' 00" S 106° 00' 00" E

*) : Valid to Vessel that will berth at PT. OTM's Jetty. Please see Chapter 13.1 for The Map.

4.2 Vessel Acceptance Criteria

Jetty No.		LOA [m]	Displacement [MT]	DWT [MT]	Summer Freeboard [m]	MLA Envelope at MHWS (0.7) [m]
1	Max	270,0	132.000	110.000	-	20,00
	Min	105,0	-	15.500	-	2,10
2	Max	160,0	23.000	18.000	-	15,80
	Min	39,5	-	500	1,3	0,80

4.3 Tug Requirements - According to Port Authority Regulation

LOA [m]	No. of Tugs [Unit]	Total Power [HP]
70 - 100	1	800
>100 - 150	2	1,600 - 3,400
>150 - 200	2	3,400 - 5,000
>200 - 270	3	5,000 - 10,000

4.4 Other Requirement

Description	Condition	
	Berthing	Operational Activity
Under Keel Clearance	1.0 m for Maneuvering	
Wind Speed	< 23,5 m/s : Allowable Limits ≥ 23,5 m/s : Immediate Unberth	< 20 m/s : Allowable Limits 20 m/s : Stop Cargo Transfer 21 m/s : Disconnect Loading Arm
Storm and/or Lightning	Not Allowed	Not Allowed
Sea / Swell Criteria	To be Stabilized with condition :	
Significant Wave Height (Hs)	0,74 m	
Wave Period	2,0 to 4,0 Sec.	
Tidal Restriction	N/A	N/A
Daylight Restriction	N/A	N/A

5. Mooring Arrangements

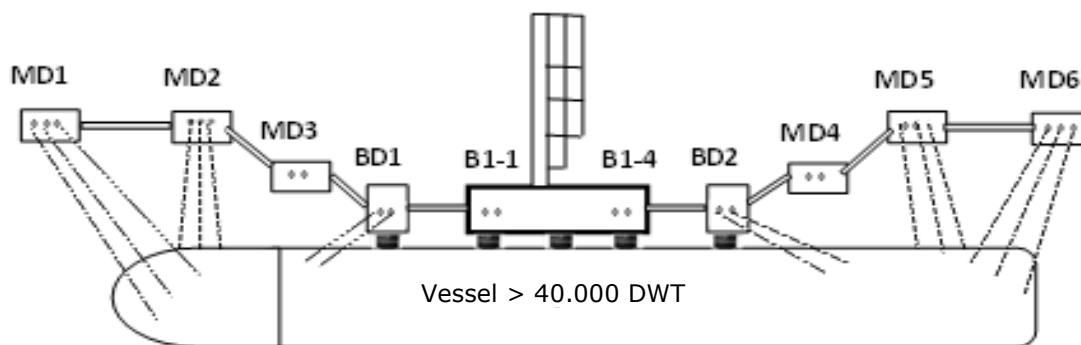
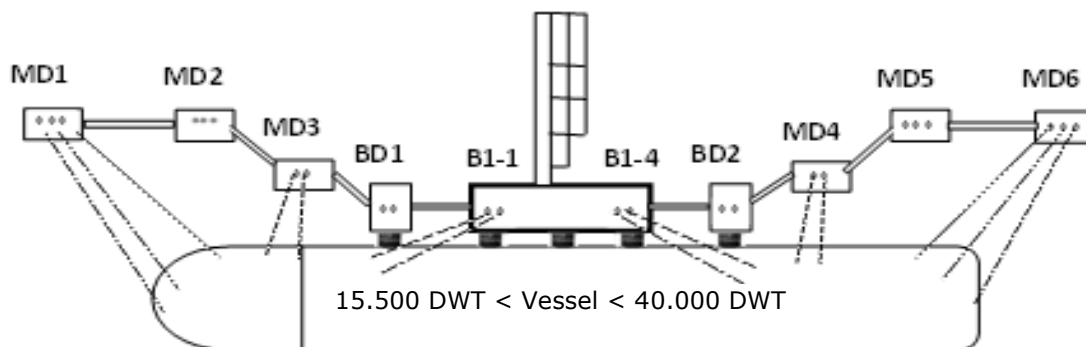
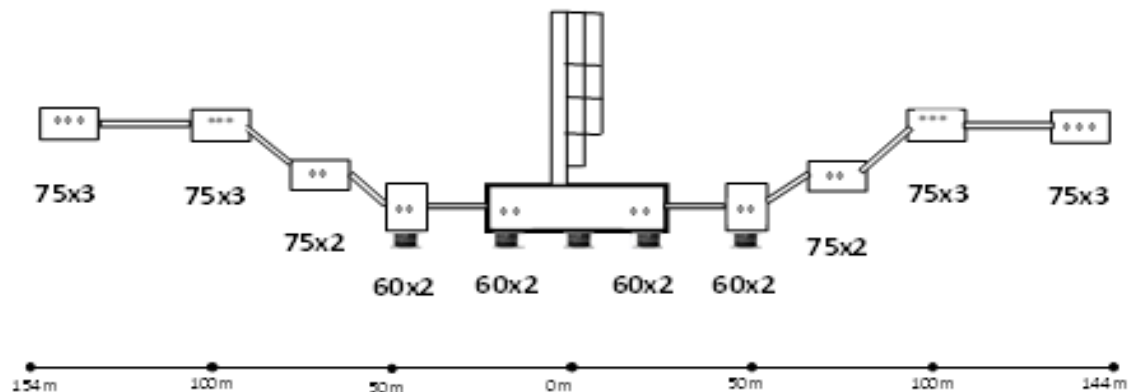
The Master shall ensure that ships alongside PT. OTM berths shall be secured with the minimum number of mooring lines and layout as indicated below:

DWT of Vessel	Mooring Lines (fore & aft)
4,000 and below	2 head/stern lines & 2 springs
Between 4,001 – 10,000	2 head/stern lines, 2 breast lines & 2 springs
Between 10,001 – 40,000	3 head/stern lines, 2 breast lines & 2 springs
Above 40,000	3 head/stern lines, 3 breast lines & 2 springs

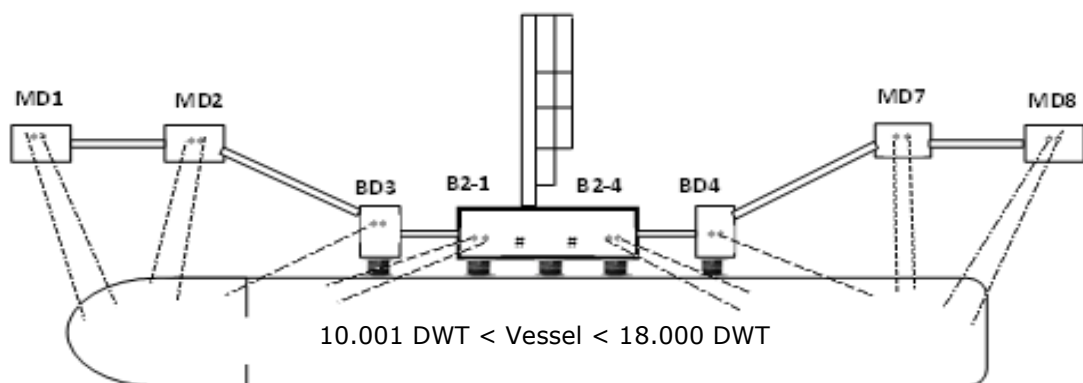
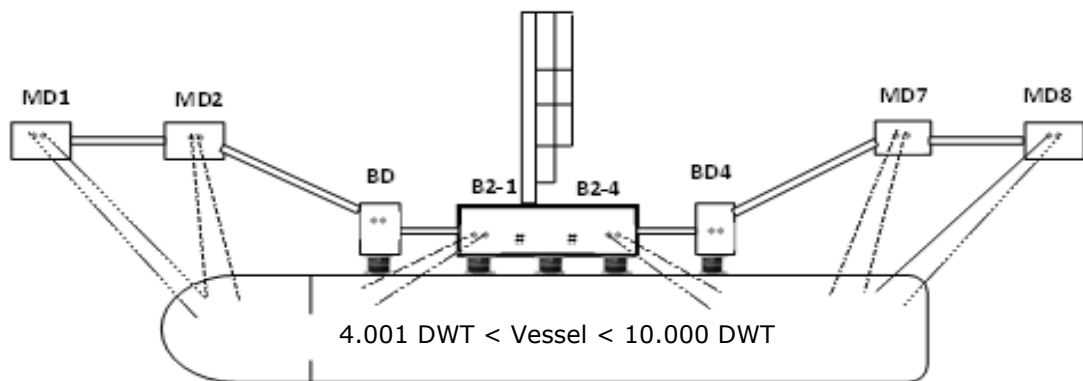
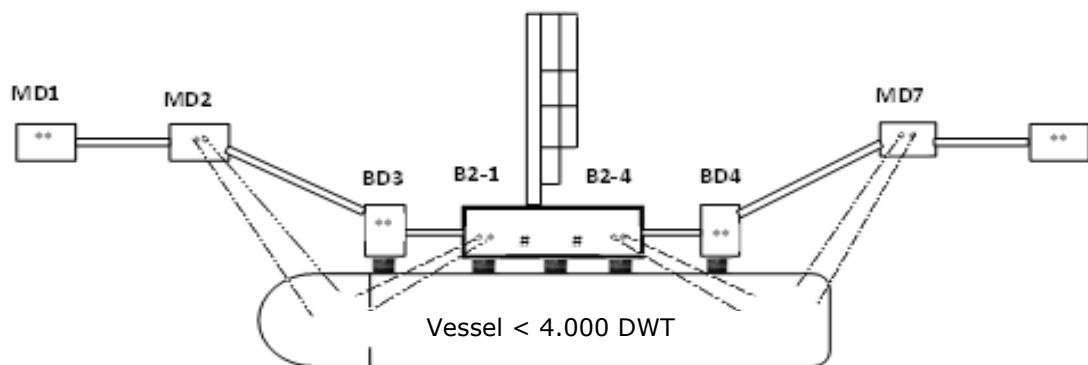
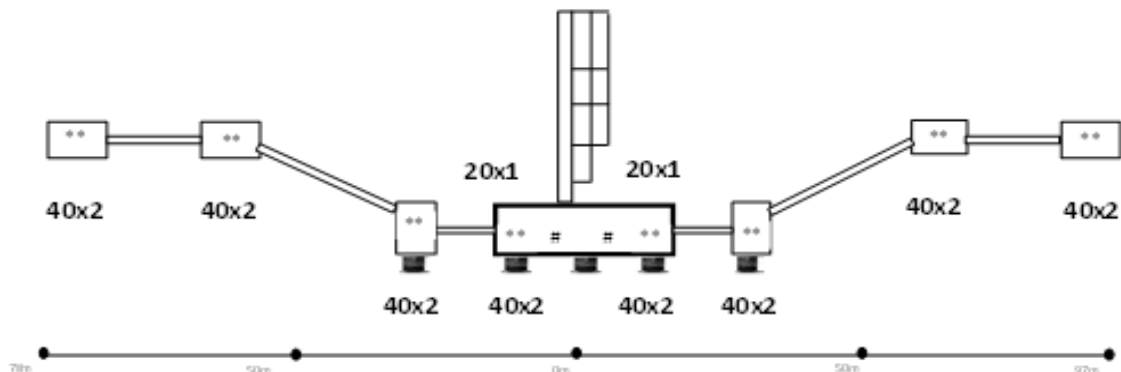
Notes:

- Mooring lines shall be secured to proper self-stowing winches, mooring bitts or bollards on board.
- Mixed mooring is not permitted.
- Whenever possible, springs and breast lines shall be of wires.
- All wires shall be attached with nylon tails not exceeding 11 meters in length.
- Automatic self-tensioning winches must not be left in automatic self-tensioning mode on completion of mooring.
- Emergency towing wires shall be in place at both forward and aft of the vessel.
- The mooring watch shall be maintained to ensure that moorings are properly tended.

5.1 Jetty 1 – Mooring Arrangement



5.2 Jetty 2 – Mooring Arrangement



6. Security

The OTM Terminal is in compliance with the International Ship and Port Facility Security Code (ISPS Code). Therefore the PAN (Pre-Arrival Notification) - ISPS Code Form has to be filled in by Master Vessel and shall return the completed Form at least 24 Hours prior to the Vessel arrival for approval of PFSO Officer. PT. OTM will provide the PAN (Pre-Arrival Notification) - ISPS Code Form document in a digital format.

On demand of the Vessel, a Declaration of Security will be provided by PT. OTM.

7. Shore Connection

Jetty No.	Product	Loading Arm	Distance Between MLA (in position area) (m)	Maximum Distance between MLA (allowable range) (m)	Minimum Distance between MLA (allowable range) (m)	Hose	Vapour Return
1	Gas oil Mogas Jet fuel MTBE Biofuel Etc	2 x 10" ANSI - 150 Lbs - RF	2.9	3.9	2.7	N/A	N/A
2	Gas oil Mogas Jet fuel Biofuel Etc	2 x 8" ANSI - 150 Lbs - RF	2.7	3.7	1.7	N/A	N/A

8. Product Transfer

Prior to any product transfer the Master of the ship will fill in the Ship/Shore Safety Check-List according to ISGOTT and sign the Dear Master Letter of ISGOTT. Both documents will be provided by the terminals representative together with the Guideline for Completing the Ship/Shore Safety Check-List before starting operation.

9. Other Facilities

With prior arrangements, the following services can be provided at designated berths as indicated below:

Activity	Jetty No.
Supply of nitrogen	1 & 2
Supply of fresh water	1 & 2
Ship/Ship cargo transfer via jetty connecting pipelines	1 & 2
Supply of bunker fuels via pipeline & barge	N/A
Receiving/disposal of tank washing/slop	N/A

10. Communication

10.1 Vessel Information

PT. OTM will provide the ship's agent with the digital format of the Jetty Information Booklet and Tanker Nomination Form. The later has to be filled in and returned.

10.2 Prior to Berthing

The agent of the ship will inform PT. OTM 3 hours in advance of the estimated arrival time (ETA) of the ship at the PT. OTM terminal.

10.3 Prior to Product Transfer

For reasons of safety good communication between ship and terminal must be ensured in accordance with the safety checklist. In order to meet these regulations a radio will be handed out, which must be within hearing range of the person on duty. The same will have to be returned prior to sailing. The adjustments of the radio should not be changed since it would interfere with the reliability of the radio. Furthermore we would like to point out that OTM will hold the Master responsible for any damage caused by misuse on purpose of the radio.

The ship will be called by its name from the PT. OTM control room. PT. OTM should be called as follows:

"PT. OTM control room this is (Name of the ship).

11. Emergency Instruction

In case of fire or explosion

- Immediately stop all activities in a safe manner.
- Push the nearest emergency shut down button. See Terminal Emergency Map (Chapter 13.2).
- Rescue injured and endangered people, but only if safe to do so.
- Inform the control room on WHERE did WHAT happen and WHO is informing by using radio, terminal telephone (116) or UHF (Channel 1).
- Stop all ventilation and close all openings.
- Stop cargo pumps and close all valves when discharging.
- When loading, close all valves after confirming terminal cargo pumps are stopped.
- Rig pilot ladder or accommodation ladder on offshore side for rescue/evacuation purpose.
- If possible, fight the fire with ship's fire-fighting system and prevent fire from spreading.
- Direct firefighting in cooperation with the terminal.
- Standby to disconnect loading arms/hoses.
- Put engines on standby.
- Follow escape routes to an upwind assembly point. See Terminal Emergency Map (Chapter 13.2).

In case of spills or gas releases

- Immediately stop all activities in a safe manner.
- Shut down ignition sources.
- Push the nearest emergency shut down button. See Terminal Emergency Map (Chapter 13.2).
- Inform the control room on WHERE did WHAT happen and WHO is informing by using radio, terminal telephone (116) or UHF (Channel 1).
- Keep upwind of the spill. Use proper PPE. Refer to the MSDS for material spilled.
- Investigate source of spillage and stop further spillage, but only if safe to do so.
- Stop cargo operations when spillage is from the ship.
- Seek assistance from the terminal to disperse and/or contain spillage as necessary.
- Use absorbents and/or dispersants to clean up spillage on deck as appropriate.
- Follow escape routes to an upwind assembly point. See Terminal Emergency Map (Chapter 13.2).

In case of ship collision or grounding at jetty approaches

- Inform the control room on WHERE did WHAT happen and WHO is informing by using radio, terminal telephone (116) or UHF (Channel 1).
- Consult Port Authority who is trained to handle marine emergencies.

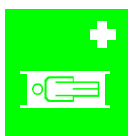
When the alarm sounds

- Immediately stop all activities in a safe manner.
- Shut down all ignition sources.
- Follow escape routes to an upwind assembly point. See Terminal Emergency Map (Chapter 13.2).

Types of Alarm

Emergency Alarm	All Clear Alarm	Tsunami Alarm
		

If Emergency Alarm:

Stop all activities, shut-down all ignition sources	Rescue casualties	Push nearest Emergency button	Inform control room (116 / radio)	Initiate first intervention if possible	Follow marked escape routes to assembly point
					

Always follow the instructions of PT. OTM personnel

12. Guidelines for Completing the Ship / Shore Safety Check-List

In Accordance with ISGOTT (International Safety Guide for Oil Tankers and Terminals)

12.1 Part 'A' – Bulk Liquid General – Physical Checks

A1. There is safe access between the ship and shore.

The access should be positioned as far away from the manifolds as practicable. The means of access to the ship should be safe and may consist of an appropriate gangway or accommodation ladder with a properly secured safety net fitted to it. Particular attention to safe access should be given where the difference in level between the point of access on the ship and the jetty or quay is large, or is likely to become large.

When terminal access facilities are not available and a ship's gangway is used, there should be an adequate landing area on the berth so as to provide the gangway with a sufficient clear run of space and so maintain safe and convenient access to the ship at all states of tide and changes in the ship's freeboard.

Near the access ashore appropriate life-saving equipment should be provided by the terminal. A lifebuoy should be safely and properly illuminated during darkness.

Persons who have no legitimate business on board, or who do not have the Master's permission, should be refused access to the ship.

The terminal should control access to the jetty or berth in agreement with the ship.

A2. The ship is securely moored

When considering this item, due regard should be given to the need for adequate fendering arrangements.

Ship should remain adequately secured in their moorings. Alongside piers or quays, ranging of the ship should be prevented by keeping all mooring lines taut. Attention should be given to the movement of the ship caused by wind, currents, tides or passing ships and the operation in progress.

Wire ropes and fibred ropes should not be used together in the same direction (i.e. as breast line, spring lines, head or stern lines) because of the difference in their elastic properties.

A3. The agreed ship / shore communication system is operative

Communication should be maintained in the most efficient way between the Responsible Officer on duty on the ship and the Terminal Representative.

When telephones are used, the telephones both on board and ashore should be continuously manned by a person who can immediately contact his respective supervisor. Additionally, the supervisor should have a facility to override all calls. When radio systems are used, the units should preferably be portable and carried by the supervisor or a person who can get in touch with his respective supervisor immediately. Where fixed system are used, the guidelines for telephones should apply.

The selected primary and back-up systems of communication should be recorded on the check-list and necessary information on telephone numbers and/or channels to be used should be exchanged and recorded.

The telephone and portable radio system should comply with the appropriate safety requirements.

A4. Emergency towing-off pennants are correctly rigged and positioned

Unless the terminal specifically advises to the contrary, emergency towing-off pennants (fire wires) should be positioned on both the off-shore bow and quarter of the ship. At a buoy mooring, emergency towing-off pennants should be positioned on the side opposite to the hose string.

There are various methods for rigging emergency towing-off pennants currently in use. Some terminal may require a particular method to be used the ship should be advised accordingly.

A5. The ship's fire hoses and fire-fighting equipment are positioned and ready for immediate use.

See Question 6 below.

A6. The terminal's fire-fighting equipment is positioned and ready for immediate use.

Fire-fighting equipment on board and on jetty should be correctly positioned and ready for immediate use.

Adequate units of fixed or portable equipment should be stationed to cover the ship's cargo deck and the jetty area, having due regard to the presence of both the ship and nearby shore tanks. The shore and ship's fire-main systems should be pressurized or be capable of being pressurized at short notice.

Both ship and shore should ensure that their fire - main system can be interconnected in a quick and easy way utilizing, if necessary, the international shore fire connection (see Question 28).

A7. The ship's cargo and bunker hoses, pipelines and manifolds are in good condition, properly rigged and appropriate for the service intended.

See Question 8 below.

A8. The terminal's cargo and bunker hoses or arms are in good condition, properly rigged and appropriate for the service intended.

Hoses should be in a good condition and properly fitted and rigged so as to prevent strain and stress beyond design limitations.

All flange connections should be fully bolted and any other types connections should be properly secured.

Hoses and pipelines and metal arms should be constructed of material suitable for the substance to be handles, taking into account its temperature and the maximum operating pressure.

Cargo hoses should be indelibly marked so as to allow the identification of the product for which they are suitable, specified maximum working pressure, the test pressure and the last date of testing at this pressure. If to be used at the temperatures other than ambient, maximum and minimum service temperature should be marked.

A9. The cargo transfer system is sufficiently isolated and drained to allow safe removal of blank flanges prior to connection.

A positive means of conforming that both ship and shore cargo system are isolated and drained should in place and used to confirm that it is safe to remove blank flanges prior to connection. The means should provide protection against pollution due to unexpected and

uncontrolled release of product from the cargo system and injury to personnel due to pressure in the system suddenly being released in an uncontrolled manner.

A10. Scupper and save-alls on board are effectively plugged and drip trays are in position and empty.

Where applicable, all scuppers on board should be properly plugged during the operations. Accumulation of water should be drained off periodically.

The ship's manifold should ideally be provided with fixed drip trays in accordance with OCIMF recommendations, where applicable. In the absence of fixed containment, portable drip trays should be used.

All drip trays should be emptied in an appropriate manner whenever necessary but always after completion of the specific operation.

When only corrosive liquids or refrigerated gases are being handled, the scuppers may be kept open, provided that an ample supply of water is available at all times in the vicinity of the manifolds.

A11. Temporarily removed scupper plugs will be constantly monitored.

Scupper that are temporarily unplugged, in order to drain clean rainwater from the cargo deck for example, must be constantly and closely monitored. The scupper must be re-sealed immediately in the event of a deck oil spill or any other incident that has the potential to cause pollution.

A12. Shore spill containment and sumps are correctly managed

Shore containment facilities, such as bund walls, drip trays and sump tanks, should be properly maintained, having been sized for an appropriate containment volume following a realistic risk assessment.

Jetty manifolds should ideally be provided with fixed drip trays; in their absence, portable drip trays should be used.

Spill or slop transfer facilities should be well maintained and, if not an automatic system, should be readily available to deal with spilled product or rainwater.

A13. The ship's unused cargo and bunker connections are properly secured with blank flanges fully bolted

See Question 14 below

A14. The terminal's unused cargo and bunker connections are properly secured with blank flanges fully bolted

Unused cargo and bunker connections should be closed and blanked. Blank flanges should be fully bolted and other types fittings, if used, properly secured.

A15. All cargo, ballast and bunker tank lids are closed

Apart from the openings in use for tank venting (see Question 29), all openings to cargo, ballast and bunker tanks should be closed and gas tight.

Except on gas tankers, ullaging and sampling points may be opened for the short periods necessary for ullaging and sampling, which activities should be conducted taking account of the controls necessary to avoid electrostatic discharge.

Closed ullaging and sampling systems should be used where required by international, national or local regulations and agreements.

A16. Sea and overboard discharge valves, when not in use, are closed and visibly secured.

Experience shows the importance of this item in pollution avoidance on ships where cargo lines and ballast system are interconnected. Remote operating controls for such valves should be identified in order to avoid inadvertent opening.

If appropriate, the security of the valves in question should be checked visually.

A17. All external doors, port and windows in the accommodation, stores and machinery spaces are closed. Engine room vents may be open

External doors, windows and portholes in the accommodation should be closed during cargo operations. These doors should be clearly marked as being required to be closed during such operations, but at no time should they be locked.

This requirement does not prevent reasonable access to spaces during operations, but doors should not be left open when unattended.

Engine room vents may be left open. However, consideration should be given to closing them where such action would not adversely affect the safe and efficient operation of the engine room spaces served.

A18. The ship's emergency fire control plans are located externally.

A set of fire control plans should be permanently stored in a prominently marked weather-tight enclosure outside the accommodation block for the assistance of shore side fire-fighting personnel. A crew list should also be included in this enclosure.

If the ship is fitted, or is required to be fitted, with an inert gas system (IGS), the following points should be physically checked:

A19. Fixed IGS pressure and oxygen content recorders are working.

All recording equipment should be switched on, tested as per manufacturer's instructions and operating correctly.

A20. All cargo tank atmospheres are at positive pressure with oxygen content of 8% or less by volume.

Prior to commencement of cargo operations, each cargo tank atmosphere should be checked to verify an oxygen content of 8% or less by volume. Inerted cargo tanks should be kept at a positive pressure at all times.

12.2 Part 'B' – Bulk Liquid General- Verbal Verification

B21. The ship is ready to move under its own power.

The ship should be able to move under its own power at short notice, unless permission to immobilize the ship has been granted by the port authority and the Terminal Representative. Certain conditions may have to be met for permission to be granted.

B22. There is an effective deck watch in attendance on board and adequate supervision of operation on the ship and in the terminal.

The operation should be under constant control and supervision on the ship and in the terminal.

Supervision should be aimed at preventing the development hazardous situations. However, if such a situation arises, the controlling personal should have adequate knowledge and the means available to take corrective action.

The controlling personal on the ship and in the terminal should maintain effective communications whit their respective supervisors.

All personnel connected whit the operations should be familiar with the dangers of the substances handled and should wear appropriate protective clothing and equipment.

B23. There are sufficient personnel on board and ashore to deal with an emergency.

At all times during the ship's stay at the terminal, a sufficient number of personal should be present on board the ship and the shore installation to deal with an emergency.

B24. The procedures for cargo, bunker and ballast handling have been agreed.

The procedures for the intended operation should be pre-planned. They should be discussed and agreed upon by the responsible officer and Terminal Representative prior to the start of the operation. Agreed arrangements should be formally recorded and signed by both the Responsible Officer and Terminal Representative. Any change in the agreed procedure that could affect the operation should be discussed by both parties and agreed upon. After both parties have reached agreement, substantial changes should be laid down in writing as soon as possible in sufficient time before the change in procedure takes place. In any case, the change should be laid down in writing within the working period of those supervisors on board and ashore in whose working period agreement on the change was reached.

The operations should be suspended and all deck and vent openings closed on the approach of an electrical storm.

The properties of the substances handled, the equipment of ship and shore installation, and the ability of the ship's crew and shore potential personnel to execute the necessary operation and to sufficiently control the operations are factor which should be taken into account when ascertaining the possibility of handling a number of substances concurrently. The manifold areas, both on board and shore, should be safely and properly illuminated during darkness.

The initial and maximum loading rates, topping-off rates and normal stopping times should be agreed, having regard to:

The nature of the cargo to be handled

- The arrangement and capacity of the ship's cargo lines and gas venting systems.
- The maximum allowable pressure and flow rate in the ship / shore hoses and loading arms
- Precautions to avoid accumulation of static electricity
- Any other flow control limitations

A record to this effect should be formally made as above.

B25. The emergency signal and shutdown procedure to be used by the ship and shore have been explained and understood.

The agreed signal to be used in the event of an emergency arising ashore or on board should be clearly understood by shore and ship personnel.

An emergency shutdown procedure should be agreed between ship and shore, formally recorded and signed by both the Responsible Officer and Terminal Representative.

The agreement should state the circumstances in which operations have to be stopped immediately.

Due regard should be given to the possible introduction of dangers associated with the emergency shutdown procedure.

B26. Material Safety Data Sheet (MSDS) for the cargo transfer have been exchanged where requested.

An MSDS should be available on request to the receiver from the terminal or ship supplying the product.

As a minimum, such information sheets should provide the constituents of the product by chemical name, name in common usage, UN number and the maximum concentration of any toxic components, expressed as a percentage by volume or as ppm.

B27. The hazard associated with toxic substances in the cargo being handled have been identified and understood.

Many tanker cargoes contain components that are known to be hazardous to human health.

In order to minimize the impact on personnel, information on cargo constituents should be available during the cargo transfer to enable the adoption of proper precautions. In addition, some port states require such information to be readily available during cargo transfer and in the event of an accidental spill. This is particularly relevant to cargoes that could contain H₂S, benzene or lead additives.

B28. An international shore fire connection has been provided.

The connection must meet the standard requirements and, if not actually connected prior to commencement of operations, should be readily available for use in an emergency.

B29. The agreed tank venting system will be used.

Agreement should be reached and recorded as to the venting system to be used for the operation, taking into account the nature of the cargo and international, national or local regulations and agreements.

There are three basic system for venting tanks:

1. Open to atmosphere via open ullage ports, protected by suitable flame screens.
2. Fixed venting systems which includes inert gas systems.
3. To shore through a vapour collection system (see Question 32 below).

B30. The requirements for closed operations have been agreed.

It is a requirement of many terminals that, when the ship is ballasting into cargo tanks, loading or discharging, it operates without recourse to opening ullage and sighting ports. In these cases, ships will require the means to enable closed monitoring of tank contents, either by a fixed gauging system or by using portable equipment passed through a vapor lock, and preferably backed up by an independent overfill alarm system.

B31. The operation of the P / V system has been verified.

The operation of the P/V valves and/or high velocity vents should be checked using the testing facility provided by the manufacturer. Furthermore, it is imperative that an adequate check is made, visually or otherwise, to ensure that the check lift is actually operating the valve. On occasion, a seized or stiff vent has caused the check lift drive pin to shear and the ship's personnel to assume, with disastrous consequences, that the vent was operational.

B32. Where a vapour return line is connected, operating parameters have been agreed.

Where required, a vapour return line will be used to return flammable vapours from the cargo tanks to shore.

The maximum and minimum operating pressures and any other constraints associated with the operation of the vapour return system should be discussed and agreed by ship and shore personnel.

B33. Independent high level arms, if fitted, are operational and have been tested.

Owing to the increasing reliance placed on gauging system for closed cargo operations, it is important that such system are fully operational and that backup is provided in the form of an independent overfill alarm arrangement. The alarm should provide audible and visual indication and should be set at a level that will enable operations to be shutdown prior to the tank being overfilled. Under normal operations, the cargo tank should not be filled higher than the level at which the overfill alarm is set.

Individual overfill alarm should be tested at the tank to ensure their proper operation prior to commencing loading unless the system is provided with an electronic self-testing capability which monitoring the condition of the alarm circuitry and sensor and confirms the instrument set point.

B34. Adequate electrical insulating means are in place in the ship/shore connection.

Unless measures are taken to break the continuous electrical path between ship and shore pipe work provided by the ship/shore hoses or metallic arm, stray electric currents, mainly from corrosion prevention systems, can cause electrical sparks at the flange faces when hoses are being connected and disconnected.

The passage of these currents is usually prevented by an insulating flange inserted at each jetty manifold outlet or incorporated in the construction of metallic arms. Alternatively, the electrical discontinuity may be provided by the inclusion of one length of electrically discontinuous hose in each hose string.

It should be ascertained that the means of electrical discontinuity is in place, that it is in good condition and is not being by-passed by contact with an electrically conductive material.

B35. Shore lines are fitted with a non-return valve, or procedures to avoid back filling have been discussed.

In order to avoid cargo running back when discharge from a ship is stopped, either due to operational needs or excessive back pressure, the terminal should confirm that it has a positive system that will prevent unintended flow from the shore facility onto the ship. Alternatively, a procedure should be agreed that will protect the ship.

B36. Smoking rooms have been identified and smoking requirements are being observed.

Smoking on board the ship may only take place in areas specified by the master in consultation with the Terminal Representative.

No smoking is allowed on the jetty and the adjacent area, except in building and places specified by the Terminal Representative in consultation with the Master.

Places that are directly accessible from the outside should not be designated as places where smoking is permitted should be clearly marked as such.

B37. Naked light regulations are being observed.

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 product handled in the operation.

The use of naked lights or open fires on board the ship, and within a distance of 25 meters of the ship, should be prohibited, unless all applicable regulations have been met and agreement reached by the port authority, Terminal Representative and the Master. This distance may have to be extended for ship of a specialized nature such as gas tankers.

B38. Ship/Shore telephones, mobile phones and pager requirements are being observed.

Ship/shore telephones should comply with the requirements for explosion proof construction, except when placed and used in a safe space in the accommodation.

Mobile telephones and pagers should not be used in hazardous areas unless approved for such use by a competent authority.

B39. Hand torches (flashlight) are of an approved type.

Battery operated hand torches (flashlight) should be of a safe type, approved by a competent authority. Damaged units, even though they may be capable of operation, should not to be used.

B40. Fixed VHF/UHF transceivers and AIS equipment are on the correct power mode or switched off.

Fixed VHF/UHF transceivers and AIS equipment should be switched off or on low power (1 watt or less) unless the Master, in consultation with the Terminal Representative, has established the conditions under which the installation may be used safely.

B41. Portable VHF/UHF transceivers are of an approved type.

Portable VHF/UHF sets should be of safe type, approved by a competent authority. VHF radio telephone sets may only operate in the internationally agreed wave bands. Equipment should be well maintained. Damage units, even though they may be capable of operation, should not be used.

B42. The ship's main radio transmitter aerials are earthed and radars are switched off.

The ship's main radio station should not be used during the ship's stay in port, except for receiving purposes. The main transmitting aerials should be disconnected and earthed. Satellite communications equipment may be used normally, unless advised otherwise.

The ship's radar installation should not be used unless the Master, in consultation with the Terminal Representative, has established the conditions under which the installation may be used safely.

B43. Electric cables to portable electrical equipment within the hazardous area are disconnected from power.

The use of portable electrical equipment on wandering leads should be prohibited in hazardous zones during cargo operations, and the equipment preferably removed from the hazardous zone.

Telephones cables in use in the ship/shore communication system should preferably be routed outside the hazardous zone. Wherever this is not feasible, the cable should be so positioned and protected that no danger arises from its use.

B44. Window type air conditioning units are disconnected.

Window type air conditioning units should be disconnected from their power supply.

B45. Positive pressure is being maintained inside the accommodation, and air conditioning intakes, which may permit the entry of cargo vapours, are closed.

A positive pressure should, when possible, be maintained inside the accommodation, and procedures or system should be in place to prevent flammable or toxic vapours from entering accommodation spaces. This can be achieved by air conditioning or similar system, which draws clean air from non-hazardous locations.

Air conditioning system should not be operated on 100% recirculation.

B46. Measures have been taken to ensure sufficient mechanical ventilation system in the pump room.

Pump rooms should be mechanically ventilated and the ventilation system, which should maintain a safe atmosphere throughout the pump room, should be kept running throughout cargo handling operations. The gas detection system, if fitted, should be functioning correctly.

B47. There is provision for an emergency escape.

In addition to the means of access referred to in Question 1, a safe and quick emergency escape route should be available both on board and a shore. On board the ship, it may consist of a lifeboat ready for immediate use, preferably at the after end of the ship, and clear of the moorings.

B48. The maximum wind and swell criteria for operations have been agreed.

There are numerous factors which will help determine whether cargo or ballast operations should be discontinued. Discussion between the terminal and the ship should identify limiting factors, which could include:

- Wind speed and direction and the effect on hard arms.
- Wind speed and direction and the effect on hard mooring integrity.
- Wind speed and direction and the effect on gangways.
- At exposed terminal, swell effects on moorings and gangway safety.

Such limitations should be clearly understood by both parties. The criteria for stopping cargo, disconnecting hoses or arms and vacating the berth should be written in the 'Remarks' column of the check-list.

B49. Security protocols have been agreed between the ship security officer and the port facility security officer, if appropriate.

In states that are signatories to SOLAS, the ISPS code requires that the ship security officer and the port facility security officer co-ordinate the implementation of their respective security plans with each other

B50. Where appropriate, procedures have been agreed for receiving nitrogen supplied from shore, either for inerting or purging ship's tanks, or for line clearing into the ship.

Ship and shore should agree in writing on the inert gas supply, specifying the volume required, and the flow rate in cubic meters per minute. The sequence of opening valves before beginning the operation and after completion should be agreed, so that the ship remains in control of the flow. Attention should be given to the adequacy of open vents on a tank in order to avoid the possibility of over-pressurization.

The tank pressure should be closely monitored throughout the operation. The ship's agreement should be sought when the terminal wishes to use compressed nitrogen (or air) as a propellant, either for pigging to clear shore lines into the ship or to press cargo out of shore containment. The ship should be informed of the pressure to press cargo out of shore containment. The ship should be informed of the pressure to be used and the possibility of receiving gas into a cargo tank.

If the ship is fitted, or is required to be fitted, with an inert gas system (IGS) the following statements should be addressed:

B51. The IGS is fully operational and in good working order.

The inert gas system should be in safe working condition with particular reference to all interlocking trips and associated alarms, deck seal, non-return valve, pressure regulating control system, main deck IG line pressure indicator, individual tank IG valves (when fitted) and deck P/V breaker.

Individual tank IG valves (if-fitted) should have easily identified and fully functioning open/close position indicators.

B52. Deck seals, or equivalent, are in good working order.

It is essential that the deck seal arrangements are in a safe condition. In particular, the water supply arrangements to the seal and the proper functioning of associated alarms should be checked.

B53. Liquid levels in pressure / vacuum breakers are correct.

Checks should be made to ensure that the liquid level in the P/V breaker complies with manufacturer's recommendations.

B54. The fixed and portable oxygen analyzers have been calibrated and are working properly.

All fixed and portable oxygen analyzers should be tested and checked as required by the company and/or manufacturer's instructions and should be operating correctly.

The in-line oxygen analyzer/recorder and sufficient portable oxygen analyzers should be working properly.

The calibration certificate should show that it's validity is as required by the ship's SMS.

B55. All the individual tank IG valves (if fitted) are correctly set and locked.

For both loading and discharge operations, it is normal and safe to keep all individual tank IG supply valves (if fitted) open in order to prevent inadvertent under or over-pressurization. In this mode of operation, each tank pressure will be the same as the deck main IG pressure and thus the P/V breaker will act as a safety valve in case of excessive over or under-pressure. If individual tank IG supply valves are closed for reasons of potential vapour contamination or de-pressurization for gauging etc., then the status of the valve should be clearly indicated to all those involved in cargo operations. Each individual tank IG valve should be fitted with a locking device under the control of a responsible officer.

B56. All personal in charge of cargo operations are aware that, in the case of failure of the inert gas plant, discharge operations should cease and the terminal be advised.

In the case of failure of the IG plant, the cargo discharge, de-ballasting and tank cleaning operations should cease and the terminal be advised.

Under no circumstances should the ship's officers allow the atmosphere in any tank to fall below atmospheric pressure.

If the ship is fitted with a Crude Oil Washing (COW) system, and intends to crude oil wash, the following statements should be addressed:

B57. The Pre-Arrival COW Check-List, as contained in the approved COW Manual, has been satisfactorily completed.

The approved Crude Oil Washing Manual contains a Pre-Arrival Crude Oil Washing Check-List, specific to each ship, which should be completed by the Responsible Officer prior to arrival at every discharge port where it is intended to undertake Crude Oil Washing.

B58. The COW check-list for use before, during and after COW, as contained in the approved COW Manual, are available and being used.

The approved Crude Oil Washing Manual contains a Crude Oil Washing Check-list, specific to each ship, for use before, during and after Crude Oil Washing operations. This Check-List should be completed at the appropriate times and the Terminal Representative should be invited to participate.

If the ship is planning to tank clean alongside, the following statements should be addressed:

B59. Tank cleaning operations are planned during the ship's stay alongside the store installation.

During the pre-transfer discussion between the Responsible Officer and Terminal Representative, it should be established whether any tank cleaning operations are planned while the ship is alongside and the check-list should be annotated accordingly.

B60. If 'yes', the procedures and approvals for tank cleaning have been agreed.

It should be confirmed that all necessary approvals that may be required to enable tank cleaning to be undertaken alongside have been obtained from the relevant authorities.

12.3 Part 'C' – Bulk Liquid Chemicals – Verbal Verification.

C1. Material Safety Data Sheets are available giving the necessary data for the safe handling of the cargo.

Information on the product to be handled should be available on board the ship and a shore and should include:

- A full description of the physical and chemical properties, including reactivity, necessary for the safe containment and transfer of the cargo.
- Action to be taken in the event of spills or leaks.
- Countermeasures against accidental personal contact.
- Fire-fighting procedures and fire-fighting media.

C2. A manufacturer's inhibition certificate, where applicable, has been provided.

Where cargoes are required to be stabilized or inhibited in order to be handled, ships should be provided with a certificate from the manufacturer stating:

- Name and amount of inhibitor added.
- Date inhibitor was added and the normal duration of its effectiveness.
- Any temperature limitations affecting inhibitor.
- The action to be taken should the length of the voyage exceed the effective lifetime of the inhibitor.

C3. Sufficient protective clothing and equipment (including self-contained breathing apparatus) is ready for immediate use and is suitable for the product being handled.

Suitable protective equipment (including self-contained breathing apparatus and protective clothing) appropriate to the specific dangers of the product handled, should be readily available in sufficient quantity for operational personnel both on board and a shore.

C4. Countermeasures against accidental personal contact with the cargo have been agreed.

Sufficient and suitable means should be available to neutralize the effects and remove small quantities of spilled products. Should unforeseen personal contact occur, in order to limit the consequences it is important that sufficient and suitable countermeasures are undertaken.

The MSDS should contain information on how to handle such contact with reference to the special properties of the cargo, and personnel should be aware of the procedures to follow.

A suitable safety shower and eye rinsing equipment should be fitted and ready for instant use in the immediate vicinity of places on board or a shore where operations regularly take place.

C5. The cargo handling rate is compatible with the automatic shutdown system, if in use.

Automatic shutdown valves may be fitted on the ship and a shore. The action of these is automatically initiated by, for example, a certain level being reached in the ship or shore tank being filled. Where such systems are used, the cargo handling rate should be established to prevent pressure surges from the automatic closure of valves causing damage to ship or shore line systems. Alternative means, such as a re-circulation system and buffer tanks, may be fitted to relieve the pressure surge created.

A written agreement should be made between the Responsible Officer and Terminal Representative indicating whether the cargo handling rate will be adjusted or alternative systems will be used.

C6. Cargo system gauges and alarms are correctly set and in good order.

Ship and shore cargo system gauges and alarms should be checked regularly to ensure they are in good working order.

In cases where it is possible to set alarms to different levels, the alarm should be set to the required level.

C7. Portable vapour detection instruments are readily available for the products being handled.

The equipment provided should be capable of measuring, where appropriate, flammable and/or toxic levels.

Suitable equipment should be available for operational testing of those instruments capable of measuring flammability. Operational testing should be carried out before using the equipment. Calibration should be carried out in accordance with the Safety Management System.

C8. Information on fire-fighting media and procedures has been exchanged.

Information should be exchanged on the availability of fire-fighting equipment and the procedures to be followed in the event of a fire on board or a shore.

Special attention should be given to any products that are being handled which may be water reactive or which require specialized fire-fighting procedures.

C9. Transfer hoses are of suitable material, resistant to the action of the products being handled.

Each transfer hose should be indelibly marked so as to allow the identification of the products for which it is suitable, its specified maximum working pressure, the test pressure and last date of testing at its pressure, and, if used at temperatures other than ambient, its maximum and minimum service temperatures.

C10. Cargo handling is being performed with the permanent installed pipeline system.

All cargo system transfer should be through permanently installed pipeline systems on board and ashore.

Should be necessary, for specific operational reasons, to use portable cargo lines on board or ashore. Care should be taken to ensure that these line are correctly positioned and assembled in order to minimize any additional risks associated with their use. Where necessary, the electrical continuity of these lines should be checked and their length should be kept as short as possible.

The use of non-permanent transfer equipment inside tanks is not generally permitted unless specific approvals have been obtained.

Whenever cargo hoses are used to make connections within the ship or shore permanent pipeline system, these connections should be properly secured, kept as short as possible and be electrically continuous to the ship and shore pipeline respectively. Any hoses used must be suitable for the service and be properly tested, marked and certified.

C11. Where appropriate, procedures have been agreed for receiving nitrogen supplied from shore, either for inerting or purging ship's tanks, or for line clearing into the ship.

Ship and shore should agree in writing on the nitrogen supply, specifying the volume required, and the flow rate in cubic meters per minute, the sequence of opening valve before beginning the operation and after completion should be agreed, so that the ship remains in control of the flow. Attention should be given to the adequacy of open vents on a tank in order to avoid the possibility of over-pressurization.

The tank pressure should be closely monitored throughout the operation. The ship's agreement should be sought when the terminal wishes to use compressed nitrogen (or air) as a propellant, either for pigging to clear shore lines into the ship or to press cargo out of shore containment. The ship should be informed of the pressure to be used and the possibility of receiving gas into a cargo tank.

12.4 Part 'D' – Bulk Liquefied Gases – Verbal Verification

D1. Material Safety Data sheets are available giving the necessary data for the safe handling of the cargo.

Information on each product to be handled should be available on board the ship and ashore before and during the operation.

Cargo information, in a written format, should include:

- A full description of the physical and chemical properties necessary for the safe containment of the cargo.
- Action to be taken in the event of spills or leaks.
- Countermeasures against accidental personal contact.
- Fire-fighting procedures and fire-fighting media.
- Any special equipment needed for the safe handling of the particular cargo (es).
- Minimum allowable inner hull steel temperatures.
- Emergency procedures.

D2. A manufacturer's inhibition certificate, where applicable, has been provide.

Where cargoes are required to be stabilized or inhibited in order to be handled, ships should be provided with a certificate from the manufacturer stating:

- Name and amount of inhibitor added.
- Date inhibitor was added and the normal duration of its effectiveness.
- Any temperature limitations affecting the inhibitor.
- The action to be taken should the length of the voyage exceed the effective lifetime of the inhibitor.

D3. The waster spray system is ready for immediate use.

In cases where flammable or toxic products are handled, water spray systems should be tested regularly. Details of the last tests should be exchanged.

During operations, the systems should be kept ready for immediate use.

D4. There is sufficient suitable protective equipment (including self-contained breathing apparatus) and protective clothing ready for immediate use.

Suitable protective equipment, including self-contained breathing apparatus, eye protection and protective clothing appropriate to the specific dangers of the product handled should be available in sufficient quantity for operational personnel, both on board and ashore.

Storage places for this equipment should be protected from the weather and be clearly marked.

All personnel directly involved in the operation should utilize this equipment and clothing whenever the situation requires.

Personnel required to use breathing apparatus during operations should be trained in its safe use. Untrained personnel and personnel with facial hair should not be selected for operations involving the use of breathing apparatus.

D5. Hold and inter-barrier spaces are properly inerted or filled with dry air, as require.

The spaces that are required to be inerted by the IMO Gas Carrier Codes should be checked by ship's personnel prior to arrival.

D6. All remote control valves are in working order.

All ship and shore cargo system remote control valves and their position-indicating systems should be tested regularly. Details of the last tests should be exchanged.

D7. The required cargo pumps and compressors are in good order, and the maximum working pressure have been agreed between ship and shore.

Agreement in writing should be reached on the maximum allowable working pressure in the cargo line system during operations.

D8. Re-liquefaction or boil-off control equipment is in good order.

It should be verified that re-liquefaction and boil-off control systems, if required, are functioning correctly prior to commencement of operations.

D9. The gas detection equipment has been properly set for the cargo, is calibrated, has been tested and inspected and is in good order.

Suitable gas should be available to enable operational testing of gas detection equipment. Fixed gas detection equipment should be tested for the product to be handled prior to commencement of operations. The alarm function should have been tested and the details of the last test should be exchanged.

Portable gas detection instruments, suitable for the products handled, capable of measuring flammable and/or toxic levels, should be available.

Portable instruments capable of measuring in the flammable range should be operationally tested for the product to be handled before operations commence.

Calibration of instruments should be carried out in accordance with the Safety Management System.

D10. Cargo system gauges and alarms are correctly set and in good order.

Ship and shore cargo system gauges should be checked regularly to ensure that they are in good working order.

In cases where it is possible to set alarms to different levels, the alarm should be set to the required level.

D11. Emergency shutdown systems have been tested and are working properly

Where possible, ship and shore emergency shutdown systems should be tested before commencements of cargo transfer.

D12. Ship and shore have informed each other of the closing rate of ESD valves, automatic valves or similar devices.

Automatic shutdown valves may be fitted in the ship and the shore systems. Among other parameters, the action of these valves can be automatically initiated by a certain level being reached in the tank being loaded, either on board or ashore.

The closing rate of any automatic valves should be known and this information should be exchanged.

Where automatic valves are fitted and used, the cargo handling rate should be so adjusted that a pressure surge involving from the automatic closure of any such valve does not exceed the safe working pressure of either the ship or shore pipeline systems.

Alternatively, means may be fitted to relieve the pressure surge created, such as re-circulation systems and buffer tanks.

A written agreement should be made between the Responsible Officer and Terminal Representative indicating whether the cargo handling rate will be adjusted or alternative systems will be used. The safe cargo handling rate should be noted in the agreement.

D13. Information has been exchanged between ship and shore on the maximum / minimum temperature / pressure of the cargo to be handled.

Before operation commence, information should be exchanged between the Responsible Office and Terminal Representative on the cargo temperature/pressure requirements.

This information should be in writing.

D14. Cargo tanks are protected against inadvertent overfilling at all times while any cargo operations are in progress.

Automatic shutdown systems are normally designed to close the liquid valves, and if discharging, to trip the cargo pumps, should the liquid level in any tanks rise above the maximum permitted level. This level must be accurately set and the operation of the device should be tested at regular intervals.

If ship and shore shutdown systems are to be inter-connected, then their operation must be checked before cargo transfer begins.

D15. The compressor room is properly ventilated, the electrical motor room is properly pressurized and the alarm system is working.

Fans should be run for at least 10 minutes before cargo operations commence and then continuously during cargo operations.

Audible and visual alarms, provided at airlock associated with the compressor/motor rooms, should be tested regularly.

D16. Cargo tank relief valves are set correctly and actual relief valve settings are clearly and visibly displayed.

In cases where cargo tanks are permitted to have more than one relief valve setting, it should be verified that the relief valve is set as required by the cargo to be handled and that the actual setting of the relief valve is clearly and visible displayed on board the ship. Relief valve settings should be recorded in the check-list.

12.5 Part 'E' – Security – Physical Checks

E1. Over-the-side access ladders such as pilot ladder and accommodation ladder are retracted out of reach from the water level.

All over-the-side access ladders such as pilot ladder and accommodation ladder are to be fully retracted when not in use.

E2. There is sufficient illumination on deck and over the shipside.

The ship's deck and access point to the ship should be illuminated during hours of darkness and periods of low visibility while conducting ship/port interface activities.

Additional lighting may be necessary to protect against a heightened risk of a security incident. When necessary, the additional lighting requirements may be accomplished by coordinating with the port facility to provide additional shore side lighting.

E3. There is sufficient illumination on the jetty platform.

All jetty platform and access points to the ship from shore should be illuminated during hours of darkness and periods of low visibility while conducting ship/port interface activities.

E4. There is a security patrol in place.

A security patrol should be maintained by the vessel and the port facility while conducting ship/port interface activities. Regular patrols should be conducted at appropriate intervals by the designated security personnel.

E5. A gangway watch is maintained.

A gangway watch is to be maintained at all times while conducting ship/port interface activities to deter unauthorized access.

E6. All visitors are screened.

Appropriate access control system should be in place to screen all visitors to the ship and port facility. Proper procedures for screening visitors to be in place to ensure that only authorized person is allowed onboard the vessel or into the port facility.

E7. A visitor's log is in use.

Designated security personnel of the ship and port facility should maintain a visitor log sheet and record entry/exit of all personnel in the security occurrence log.

E8. All unaccompanied baggage is identified and screened.

All unaccompanied baggage (i.e. any baggage, including personal effects, which is not with the member of the ship's or port facility personnel at the point inspection or search) is identified and subjected to appropriate screening, including searching, before it is accepted on board or into the port facility.

E9. Visitors are escorted to the meeting place.

All visitors allowed onboard or into the port facility must be escorted to their meeting place at all times.

E10. Access into the accommodation is restricted.

Restricted areas to be established on the ship, specify their extent, times of application, to the security measures to be taken to control access to them and those to be taken to control activities within them. The purposes of restricted areas are to prevent unauthorized access; protect security-sensitive areas within the ship; and protect cargo and ship's stores from tampering.

E11. Access into the port facility is restricted.

The port facility should identify the appropriate locations where access restrictions or prohibitions should be applied for each of the security levels. Means of identification required to allow access to the port facility and for individuals to remain within the port facility without challenge should be established.

E12. Other doors into the accommodation not in use secured.

Doors into the accommodation or restricted areas should be clearly marked, indicating that access to the area is restricted and that unauthorized presence within the area constitutes a breach of security. This access must be secured when not in use.

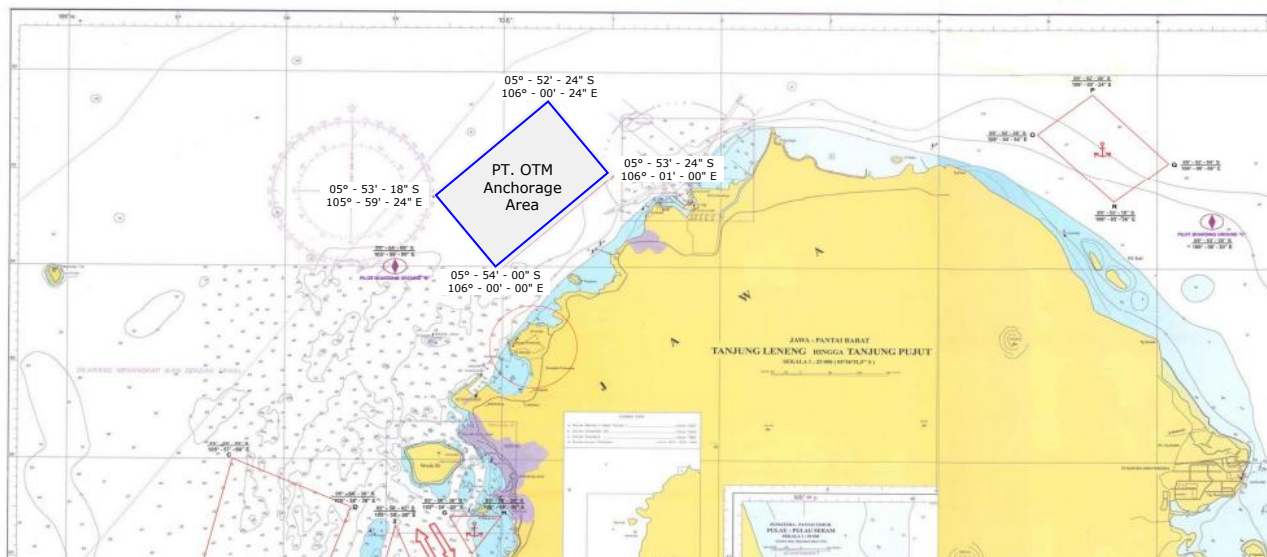
E13. Doors into stores and other compartments not in used secured.

All doors into stores and other compartments onboard the ship and in the port facility must be secured when not in use. This is to prevent unauthorized entry and tampering of the stores and cargoes.

13. Attachment

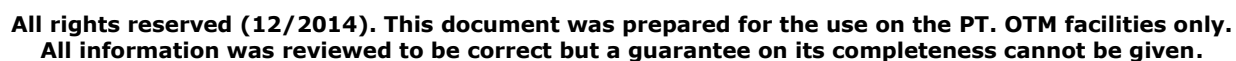
13.1 Pilot Boarding Ground Map (Anchorage Area)

ALUR PELAYARAN DAN TEMPAT BERLABUH SEKITAR SELAT SUNDA KEPANDUAN BANTEN



Source : Regulation of Port Authority of Banten Province, 2014.

TERMINAL EMERGENCY MAP





HSSE Department

Jetty Information Booklet

Document : JIB
Version : 2.1
Page : 36 of 36
Prepared by : HSSE

14. Reference

- OCIMF (Oil Company International Marine Forum).
- ISGOTT (International Safety Guide for oil tankers and Terminal).
- Kementerian Perhubungan. 2014. Sistem dan Prosedur Pemanduan Kapal Di Perairan Wajib Pandu Kelas I Banten. Merak: *Kesyahbandaran Dan Otoritas Pelabuhan Kelas I Banten*.
- SKM Design Brief.