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SK Energy Marine Terminal Information & Regulation Booklet

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INTRODUCTION

The purpose of this booklet is intend to provide for the ship's master, owner, operator and agent with general information regulations and requirements regarding to facilities and services available at the SK Energy Marine Terminal. It may be useful to the safety operation of Oil & Chemical Tanker and Gas Carrier in making plan to minimize the possibility of accident and to control the consequence of accident which might be occurred while an Oil & a Chemical Tanker and a Gas Carrier is alongside at the SK Energy Marine Terminal and within port limits, but does not supersede or replace official publications, charts, laws, local regulations covering waters and areas. All of these information in booklet can not be held responsible for any errors or omissions contained there in. It means that SK Energy Marine Terminal assumes no responsibility for the accuracy of this booklet or for the consequences of using it for any purpose whatsoever.

These stipulations shall apply to all Oi & Chemical Tankers and Gas Carriers calling at the SK Energy Marine Terminal for Loading/ Unloading. Especially your attention is drawn to the instructions to ship regarding safety regulations which control and govern while you stay at the our terminal. All of the other legal formalities and safety regulations excluded in this booklet are to be under the control of the “Ulsan Port Operation Manual” and “Port Regulations” correspondingly.

The master or person in charge of any ship while at the our terminal, shall have adequate knowledge of these conditions, regulations and requirements and ensure that his crew members are fully informed of them.

RevisionHistory

Version	Date
1st Edition	2018.06
2nd Edition	2019.07
3rd Edition	2021.05

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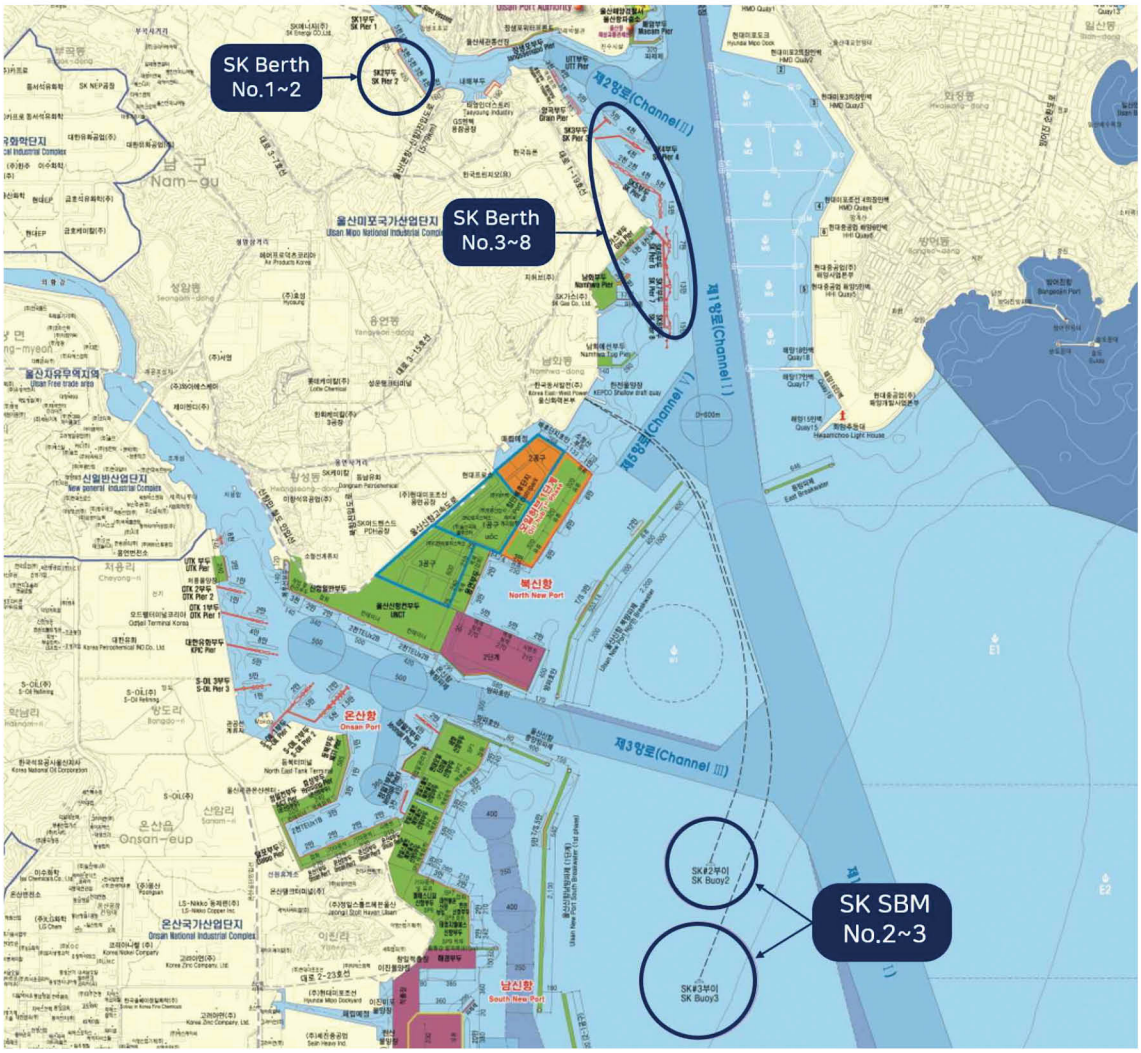
1. GENERAL INFORMATION

Berth Description										
Classification	Berth #1	Berth #2	Berth #3	Berth #4	Berth #5	Berth #6	Berth #7	Berth #8	SBM #2	SBM #3
Berthing Capacity (Vessels)	2	6	1	3	5	1	1	1	1	1
Berth Length (m)	319	570	289	240	699	330	370	400	–	–
Main Commodity	Oil, Chemical, Gas									



2. SAFETY AND SECURITY

2.1 Emergency Alarms

At the SK Energy Marine Terminal, in the event of the following occurring:

- Fire / Explosion
- Escape of Toxic and/or Flammable Gases / Liquids
- Oil spill
- Berth collision / Damage
- Medical Emergency
- Person Overboard
- Security Accident

DO NOT HESITATE TO RAISE THE ALARM

Terminal : Continuous sounding of alarm bell

Ship : One or more blasts on the ship's whistle, each blast of not less than 10 seconds duration, supplemented by a continuous sound of the general alarm system.

2.2 Emergency Communications

At the SK Energy Marine Terminal the primary method of communication will be via the UHF radio provided by the terminal to ships on their arrival alongside.

Secondary means of communication will be via the ship's telephone placed on board specifically for this purpose.

2.3 Emergency Actions

The following table summaries the Actions to be taken in the event of an emergency at the SK Energy Marine Terminal.

ACTION–SHIP	ACTION–BERTH
Emergency on your ship	**Emergency on a ship**
a. Raise the alarm	a. Raise the alarm
b. Cease all cargo/ballast operations and close all valves if discharging. If loading only close valve after terminal advise it is safe to do so, after stopping their pumps.	b. Contact ship
c. Inform Terminal Representative	c. Cease all cargo operations and close all valves
d. Emergency Response & Action	d. Stand by to disconnect hoses or loading arms
e. Stand by to disconnect hoses	e. Emergency Response & Action
f. Bring engines to standby	f. Inform all ships in the vicinity
	g. Implement Terminal emergency plan
	h. Inform port authority (VHF Ch. 14/16, Tel.+82–119)
Emergency on another ship	**Emergency ashore**
* Stand by, and when instructed:	a. Raise alarm
a. Cease all cargo/ballast operations and close all valves	b. Cease all cargo operations and close all valves
b. Disconnect hoses	c. Emergency Response & Action
c. Bring engines and crew to standby, ready to unberth	d. If required, stand by to disconnect hoses
	e. Implement Terminal emergency plan
	f. Inform port authority (VHF Ch. 14/16, Tel.+82–119)

3. SAFETY AND SECURITY

3.1 General

Responsibility for the safe conduct of operations whilst a ship is alongside SK Energy Marine Terminal rests jointly with the Master of the ship and the responsible Terminal Representative. Therefore, before operations start, both ship and shore representatives should ensure that there is full co-operation and understanding of the safety requirements set out in the Ship/Shore Safety Check List which are based on safe practices widely accepted by the oil and tanker industries.

The Master is expected to adhere strictly to these requirements throughout the stay alongside, SK Energy Marine Terminal personnel will do likewise and co-operate fully with the ship in the mutual interest of safe and efficient operations.

Before the start of operations, and from time to time thereafter, for our mutual safety, the terminal Representative together with a responsible Ship's Officer, will make a routine inspection of the ship to ensure that the questions on the Ship/Shore Safety Check List can be answered in the affirmative. Where corrective action is needed, the terminal may not agree to operations commencing or, should they have been started, may require them to be stopped.

Similarly, if the Master considers safety is endangered by any action on the part of SK Energy Marine Terminal engaged staff or by any equipment under SK Energy Marine Terminal's control, the Master should demand immediate cessation of operations until the situation is rectified.

Repeat checks of those items marked in the Ship Shore Safety Check List will be carried out by both ship and shore personnel at intervals not exceeding 2 hours(Berth No.1~5), 4 hours(Berth No.6~8).

3.2 Vetting requirement

The following Vetting Requirement shall be evaluated by SK Energy vetting team as risk assessment process before vessels calling at SK energy marine terminal.

- Vetting profile(Shell, BP, Chevron, Exxonmobil, Total & CDI) of Operator
  - The SK energy terminal is screening 5 oil majors SIRE reports(Shell, BP, Chevron, Exxonmobil & Total) or CDI inspection for Oil & chemical tankers and LPG carriers.

• Export vessel's age

Vessel Size(DWT)	Vessel Type	Age Limit
10,000 ≤	All Type	20 years
< 10,000	Oil Tanker	20 years
	Chemical Tanker	22 years
	Asphalt/LPG Tanker	25 years

• Vessel hull type
• Vessel operational history
• Vessel incidents
• Port State control Detention history
• CAP(Condition Assessment Program) Rating
• Classification Survey
• Flag state
• Vessel's name / Registered owner / Techical operator
• P&I insurance
• Crew Matrix
• SK Terminal berthing history
• Berth fit
• Cargo
• ETC
• SK Energy Terminal is allowed any Oil Major / CDI Inspection or Company Audit. But Vessel should keep monitoring cargo operation as proper duty officer / crew and Minimum officer / crew carried out Inspection and Audit within a scope of safety.

3.3 Personal Protective Equipment (PPE)

The following minimum dress code shall be adhered to by ship's personnel while on duty alongside SK Energy Marine Terminal.

• Safety shoes or boots with steel–toe caps
• Long sleeved clothing and pants
• Chemical/Oil Resistant gloves
• Safety helmet
• Life jacket when working on the jetty
• Appropriate PPE shall be complied in accordance with the MSDS requirement

Personnel engaged in operations are actively encouraged to utilise PPE to the fullest extent during cargo transfer, hose handling and mooring operations. This includes the wearing of safety helmets and safety goggles.

Ships should establish the PPE requirements for visitors and these should include appropriate clothing, safe footwear and safety helmet. Visitors to SK Energy Marine Terminal are required to follow the safe route which is clearly marked.

3.4 Port and Terminal Security

Ulsan Port is a security regulated port as set out in the ISPS Code and associated Regulations. In accordance with this Act, SK Energy Marine Terminal is designated a 'restricted zone' and unauthorised access is an offence.
In line with the ISPS Code, the following three security levels are adopted:

a)Security Level 1 – Normal

The level for which standard security measures shall be maintained at all times.

b)Security Level 2 – Heightened

The level for which appropriate addition measures shall be maintained for a period of time as a result of heightened risk of a security incident. For SK Energy Marine Terminal, this will include additional security guards and patrols with greater scrutiny of port users.

c)Security Level 3 – Exceptional

The level for which further additional security measures shall be maintained for a limited period of time when a security incident is probable or imminent, although it may not be possible to identify the specific target. For SK Energy Marine Terminal, this may result in the removal of a ship from the berth or the delay in a ship berthing.

Declaration of Security (DOS, See Appendix M) is an agreement between a ship and either a port facility or another ship with which it interfaces specifying the security measures to be implemented. In order to coordinate the ship and Port security plans, information will be exchanged during the pre-transfer conference.

3.5 Personnel and Vehicular Access

The SK Energy Marine Terminal is within a secure area of Ulsan Port and the Port Authority is responsible for controlling access onto the berth and issuing ship's crew and visitors with the necessary security passes.
On arrival alongside, the Master should provide the Terminal Representative with a crew list and details of any visitors expected during the port stay. Shore passes will be provided by immigration service.
Access to the SK Energy Marine Terminal is available through the Terminal gate and visitors are required to report to the gate security. Line man, Surveyor, Crew and agent who are registered and reported to SK Energy can access to the terminal after checking security pass.
Vehicles of approved contractors are permitted limited access to designated areas on the jetty.
Access to vessel berthed SK Energy Marine Terminal is available through seaside by launch boat and Visitors must be required to report to the Customs.

3.6 Trade Sanction

If there is any Trade Sanction of ship or Charter Party chain against any country(ex.USA) or international organization(ex.UN), the information of trade Sanction chould be notified to Biz team through Pre-Vetting Qvestionnaire before chartering vessel and that vessel will be rejected to enter SK Terminal.

4. PRE-ARRIVAL COMMUNICATIONS

4.1 ETA Advice

Ships bound for the SK Energy Marine Terminal should provide ETA advice via their agents to both the Ulsan Port Authority and the Terminal at least 72 hours(and then 48 hours) prior to their arrival or immediately on leaving their last port, whichever is the later prior to arrival.
This ETA advice should be confirmed at least 24 hours prior to arrival at the Ulsan pilot station.

4.2 Pre-arrival Exchange of Information

At least 24 hours prior to arrival, ships should provide SK Energy Marine Terminal with the following information:(See Appendix H)

5. ARRIVAL OFF PORT

5.1 Berth Approach

Fairway in Ulsan Port[1] is as follows. The SK Energy Marine Terminal use Fairway 1 and 2. (See Appendix B for Tug Assignment Guideline of Ulsan port.)

Name		Lenth*(m)	Depth(m)	Breadth(m)	Port used Fairway
Fairway**	North	2.9	12.2 ~ 19.3	300 ~ 470	Main Port
	South	3.8	20.4 ~ 56.0	470 ~ 550	Main Port, Onsan Port, New North Port
Fairway 2		0.7	12.7 ~ 14.5	190 ~ 280	Main Port, Jangsaengpo Port
Fairway 3		1.4	18.5 ~ 27.5	290 ~ 550	Onsan Port
Fairway 4		2.0	25.5 ~ 30.0	370 ~ 760	Onsan South Port, New North Port

*) Fairway Length, Depth, Breadth measured from the chart
**) Fairway 1 is divided into north and south by East Breakwater

5.2 Pilotage

Pilotage is compulsory for all foreign ships over 500GT except those bound for anchorages E1, E2 and E3, and available throughout 24 hours.
Pilotage should be arranged through the master or via agent 24 hours in advance but no later than 3 hours in advance. Vessels should contact the pilot to advise arrival information on VHF Ch 13 and 16, at Least 2 hours prior to arrival.
Tel: +82 52 261 7703, Fax: +82 52 266 4256, Email: webmaster@ulsanpilot.co.kr

Pilots board in the following positions:

- No.1 Pilot Station : 35° 22' 36"N 129° 26' 00"E (vessels other than No.2 and No.3 Pilot Station)
- No.2 Pilot Station : 35° 22' 00"N 129° 27' 30"E (Vessels ≥ LOA 200m or Vessels ≥ G/T 50,000)
- No.3 Pilot Station : 35° 20' 55"N 129° 28' 50"E (VLCC)

1) Ministry Of Oceans And Fisheries, Safety Navigation Guide for Oil Tankers(Ulsan Port) 2015.12.

5.3 Anchorage and Waiting Areas

VTS provides anchoring instructions and anchoring position. For vessels anchoring at Anchorages E1–3, VTS will advise anchoring position by bearing and distance from Hwaam ch'u Light.

(See Appendix C/D for Ulsan Port VTS Communication Procedures/Ulsan Port Anchorage and Pilot Station)

Ulsan Port's Anchorage	
Classification	Facilities capability (GT)
M1~7	~ ≤ 2,000
E1 Anchorage	~ ≤ 10,000
E2 Anchorage	10,000 ~ 30,000
E3 Anchorage	30,000 ~ 150,000

Call	Channel	Use
Ulsan VTS	Ch.14	For VTS Communication
	Ch.10	For VTS Communication(sub)
	Ch.16	For calls and Responses

NOTE : The vessel over 150,000GT should drift out of Ulsan harbour limit.

5.4 Ocean Information

The real-time ocean information of Ulsan Port can be found in the Port Safety Ocean Information System.

Port Safety Ocean Information System provides ocean information essential for the prevention of port accidents and rapid response to accidents and traffic on the basis of various ocean information, weather prediction.

- Web site : http://www.khoa.go.kr/pois/intro.do

6. BERTHING AND MOORING

6.1 General Description of Berth

The SK Energy Marine Terminal is located in the Ulsan Bay(35-29.19N 129-23.18E). The terminal is owned and operated by SK Energy Co. Ltd.
The SK Energy Marine Terminal consist of 20 main berth and 2 SBM(About 3miles from shore.)
(See Appendix F for Terminal Layout)

1. Berting time Restrictions:

Vessels(for ballast condition) under 65,000GT or under 10.5M Draft are permitted to berth/unberth at Berth 3-8 throughout 24 hours. Larger vessels can unberth throughout 24 but are restricted to daylight berthing.

2. SK #1-1,1-2,2-7 berth limitation for ship's berthing

Berth	Limitation For Ship's berthing at daylight	Limitation For Ship's berthing at night	Remark
SK 1-1	GT 6,000 LOA 110M	GT 6,000 LOA 110M	1. When there is no vessel at SK 1-2, Over GT 5,000 ton vessel can berth at SK 1-1 2. When there is no vessel at SK 2-6, Over GT 5,000 ton vessel can berth at SK 2-7
SK 1-2	GT 6,000 LOA 110M	GT 6,000 LOA 110M	
SK 2-7	GT 7,000 LOA 115M	GT 7,000 LOA 115M	

*) Keep more than 15% of vessel's deepest draft, when vessel is passing through Jangsaengpo narrow channel for berthing/unberthing at SK 1~2

6.2 Berth References

Berth		DWT	Depth (M)	Max. Draft (M)	UKC (M)	Max. LOA (M)	Min. LOA (M)	Min. PBL (M)	Approaching Speed (cm/sec)
SK Berth NO. 1	1-1	7,500	7.5	6.5	0.7	110	–	–	–
	1-2	7,500	7.5	6.5	0.7	110	–	–	–
SK Berth NO. 2	2-1	3,000	5.5	3.6	0.4	–	–	–	–
	2-2	5,000	7.5	6.7	0.7	–	–	–	–
	2-4	5,000	7.5	7.0	0.5	–	–	–	–
	2-5	3,000	8.0	7.0	0.7	–	–	–	–
	2-6	4,000	8.0	7.0	0.7	110	–	–	–
	2-7	9,000	8.0	7.0	0.7	115	–	–	–
SK Berth NO. 3		50,000	13.0	11.8	1.2	230	100	40	12
SK Berth NO. 4	4-1	10,000	9.4	8.6	0.8	160	90	10	–
	4-2	4,000	9.1	8.3	0.8	120	80	14	–
	4-3	4,000	7.1	6.5	0.6	160	80	7	–
SK Berth NO. 5	5-1	2,000	6.0	5.4	0.5	80	60	24	–
	5-2	2,000	6.0	5.4	0.5	80	60	24	–
	5-3	5,425	7.0	6.3	0.6	104	45	18	–
	5-4	7,500	7.5	6.7	0.7	128	60	10	–
	5-5	15,000	9.2	8.2	0.8	150	71	15	–
SK Berth NO. 6		70,000	14.8	13.3	1.3	280	105	42	15
SK Berth NO. 7		130,000	15.0	13.5	1.4	280	135	46	15
SK Berth NO. 8		169,500	18.5	16.5	1.7	280	150	60	12

6.3 Tugs and Towage

The Ulsan Port Authority requires all ships entering the port to be assisted by tugs and it is the Ship's Agent's responsibility to contact Ulsan Tugs at least 2 hours before the ship's arrival.

Tugs will normally meet inbound ships in the approach channel, approximately 1 mile from the berth. The tugs will be secured using their own gear.

Berth No.4 and 5 shall be required additional tug boat(total 2 tug boat) when wind speed is exceeded 10 m/s(1 Min. Average)
(See Appendix E for Tug Assignment Guideline of Ulsan Port.)

＊ Tug Assignment for Export/Import ship at SK 1~2 Berth

Ship's GT	Berthing Tug	Unberthing Tug	Remark
~ ≤ 1,000	1 or 2	0 or 1	• SK 1-1Berthing (If There is a vessel at SK 1-2, vessel must use 2-Tug Boat for Berthing at SK 1-1) • SK 1-1Unberting (If There is a vessel at SK 1-2, vessel must use 1-Tug Boat for Unberthing at SK 1-1)
1,000 ~ 2000	1 or 2	1	• SK 1-1Berthing (If There is a vessel at SK 1-2, vessel must use 2-Tug Boat for Berthing at SK 1-1) • SK 1-1Unberting (If There is a vessel at SK 1-2, vessel must use 2-Tug Boat for Unberthing at SK 1-1)
2,000 ~ 5,000	2	1	
5,000 < ~	2	2	-

(＊) Vessel which is over GT 3,000 must use 2-Tug Boat at night regardless of Bow Thruster

6.4 Provision of Mooring Crews

Mooring crews and line boats are provided by Line handling Services and should be contacted by the Ship's Agent before the ship's arrival at Ulsan port.
One/Two line boats are required to support the mooring of all tankers at Berth 3-8

6.5 Mooring

Masters of vessels shall:

1	Ensure that their vessels are adequately secured alongside with sufficient ropes or wires which are also to the satisfaction of the Loading Master. Note that if wires are used for mooring the vessel, they must be provided with a suitable fiber tail on the end of each mooring wire. Also, the aforesaid mooring patterns are the minimum requirements. It is the vessel master's responsibility to ensure that where the situation warrants, the number of mooring lines used should be increased to suit the prevailing situation.
2	Ensure the mooring ropes of dissimilar materials, ie. mixed mooring of wire and synthetic ropes of different elasticity, shall never be used in the same direction.
3	Ensure that a strict watch is kept on their vessels' moorings and that they are tended as required to prevent undue movement of the vessel.
4	Ensure that their vessels' mooring wires or synthetic ropes are fastened only to the proper fixtures provided for this purpose.
5	Provide, rig and secure towing wires of adequate size on vessels' offshore bow and quarter with towing eyes maintained at not more than 2 metres above the waterline during all draft conditions.
6	Ensure that self tensioning winches are not used in automatic mode and shall ensure that winch brakes are kept hardened up except when moorings are being adjusted.

7	The Master is responsible for ensuring that the ship remains securely moored throughout the stay alongside. The Master must ensure that all moorings are regularly tended and maintained in a taut condition.
8	The master is responsible to maintain and implementation of the vessel's line management plan followed by Mooring Equipment Guidelines 4th edition 5.4.2 recommendations.
9	The master is responsible to maintain annual mooring winch brake test followed by Mooring Equipment Guidelines 4th edition 6.4.6 recommendations.
10	The master is responsible to maintain and implementation of the vessel's mooring system management plan followed by Mooring Equipment Guidelines 4th edition 1.8 recommendations.

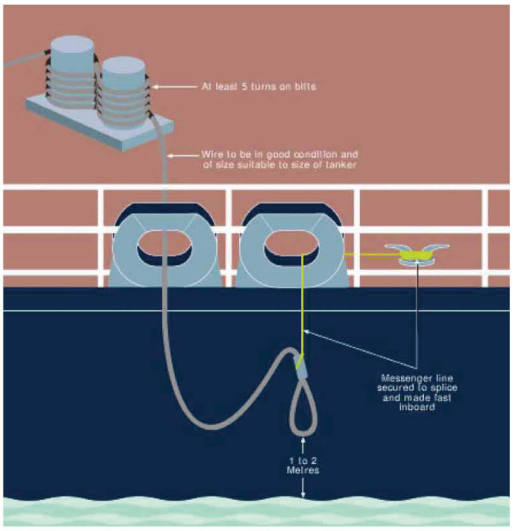
(Warning) Ship Moored at Berth 5~8 Should take precaution against passing vessel on the fairway.

Tankers moored at the SK Energy Marine Terminal are required, as a minimum, to comply, with the mooring arrangements detailed in the Mooring Plans in Appendix G.

Vessel Size(DWT)	Head/ Stern	Fore/Aft Breast	Fore/Aft Spring	Total
~ ≤ 5,000(#1, #2)	Each 2	-	Each 1	6
~ ≤ 10,000	Each 2	-	Each 2	8
~ ≤ 15,000(#5-5)	Each 2	Each 1	Each 2	10
~ ≤ 20,000(#6, #7)	Each 2	Each 2	Each 2	12
10,000 < ~ ≤ 20,000	Each 3	-	Each 2	10
20,000 < ~ ≤ 100,000	Each 3	Each 2	Each 2	14
100,000 < ~	Each 4	Each 2	Each 2	16

6.6 Emergency Towing Wires

Emergency towing wires shall be rigged and sized as described in OCIMF "Mooring Equipment Guidelines 3rd Edition" Section 3.12 with diagram. All ocean-going vessels are expected to have emergency towing wires (one near bow and one near stern) rigged while moored. Rigged wires shall be led directly from respective deck bollards to shipside chocks with no slack on deck. Heights of eyes are maintained at least 1.0~2.0 meters above water by adjusting a heaving line made up to each wire just above the eye, high enough to prevent a security breach.



In an emergency, attending harbor tugs will be able to access the eye. Emergency deployment in this situation would be by vessel personnel releasing the wires so that attending harbor tugs could gain access to them.

6.7 Berthing Approach Speed

The acceptable vessel maximum speed of breasting onto the berth should be as follows

Vessel Size(DWT)	Berthing Velocity(m/sec)	Berthing Angle(deg)
~ ≤ 16,000	0.20 m/sec	10 deg (Max)
16,000 < ~	0.15 m/sec	10 deg (Max)
Before Facing Fender	0.10 m/sec	10 deg (Max)

6.8 Provision of Ship/Shore Access

Where possible, shore gangway will be made available, failing which ship must provide a gangway. Ship must secure a safety net under the gangway. If shore gangway is used, ship to provide a strong landing point for the shipboard end of the gangway and a bulwark where applicable. The provision and use of the shore gangway is on condition that users of gangway do so at their own risk.

The SK Energy Marine Terminal shall not be liable to the vessel, master or any party in respect of any injuries, claims, damages or liabilities arising out of the use of the gangway regardless of the cause of such injuries, damage or liability.

An accommodation ladder or pilot ladder should be kept rigged on the offshore side but due to security concerns raised to deck level when not in use and deployed only when necessary.

A lifebuoy eqoipped with a self-igniting light and buoyant lifeline should be availble for immediate use in the vicinity of the embarkation and disembarkation arrangement when in use.

7. COMMUNICATIONS WHILE BERTHED

7.1 General

During the pre-transfer conference, the terminal representative will provide the ship with a portable UHF radio and a spare fully-charged battery with Charger. The radio must be kept by the ship's Duty Officer at all times. The radio is tuned to the terminal frequency and is to be used for cargo transfer and emergency use only.

Identification of the name of the ship should always be included in communications to avoid any misunderstanding. The shore identity is "SK Energy Marine Terminal".

A secondary means of voice communication will be via the Ship's telephone for this purpose

(*) SK Energy Marine Terminal Office : +82 52 208 2799

7.2 Ship/Shore Safety Check List and Operational Agreement

On arrival at the berth, the Terminal representative will present the ship with a copy of a folder containing the following documents:

- Safety Letter to Master
- Emergency Procedure Notice
- Ship/Shore Safety Check List
- Cargo Nomination and Transfer Plans
- Port Security Requirements

The various forms, information and procedures laid out in the document formalise the conduct and procedures governing ship/shore operations at the jetty which are to be mutually agreed before operations commence.

The agreements reached in the document remain in force throughout the time a ship remains alongside the SK Energy Marine Terminal. Any changes made to these agreements during the course of the cargo operation must be again agreed in writing.

All items contained in the Ship/Shore Safety Check List must remain constantly under review. However, the ship and shore are required to jointly recheck those items requiring formal recheck at intervals not exceeding 2 hours(Berth No.1~5), 4 hours(Berth No.6~8).

7.3 Communications During Cargo Transfer

The maintenance of good communications throughout cargo transfer operations is fundamental to ensuring the safety of the activity.

During cargo operations, if for any reason it becomes necessary to stop cargo in an emergency, the party requesting the stop should notify the other party by UHF radio, or any other means, requesting “Emergency Stop”.

All transfer pumps must be immediately stopped and ship and shore manifolds closed until the situation is investigated and joint agreement is reached on resuming operations.

During the pre–transfer conference, communications procedures will be agreed for conducting specific activities and will include agreed notice periods for conducting ship or shore stops.

8. RESPONSIBILITIES

8.1 Jurisdiction

The Ulsan Port is within the jurisdiction of the Korea Coast Guard and officers may board arriving ships at random to undertake safety and anti-pollution inspections. No prior notice will be given to vessels which are subjected to random / spot inspection by officers representing the respective authorities.

8.2 Conditions of Ship Acceptance

SK Energy Marine Terminal accepts vessels for handling at its terminal on the understanding that operations are conducted safely and expeditiously and that berths are vacated as soon as practicable after operations are completed. Vessels with defects found on arrival may be refused to berthing until the defect is corrected.

The SK Energy Marine Terminal reserves the right to suspend operations and require the removal of any vessel from the Terminal for:

1	Vessels are scheduled to berthing at SK Energy Marine Terminal must approved SIRE inspection or CDI inspection for oil tankers, oil & chemical tankers, LPG tankers and chemical tankers prior to calling at the terminal. If subject tankers had no previous SIRE approval histories or CDI inspection histories, vessels are not allowed to berthing at our terminal.
2	Flagrant or continued disregard of statutory and terminal Regulations, and all Industry Safety Practices as per International Safety Guide for Oil Tankers and Terminals (ISGOTT).
3	Defects in vessel, equipment, manning or operations which in the reasonable opinion of the SK Energy Marine Terminal present a hazard to the SK Energy Marine Terminal's premises, personnel or operations.
4	Operational performance (appropriate to the type of vessel and operation) that fails to utilize satisfactorily the available Terminal facilities and thereby, in the reasonable opinion of the terminal, constitutes an unacceptable constraint on the terminal's operations.
5	Terminal shall not be liable for any costs incurred by a Vessel, its Owners, Charterers or Agents: ① As a result of a refusal from that Vessel to load or discharge all or part of a nominated shipment. ② Delay to or suspension of discharging, or a requirement to vacate the berth arising from these Regulations.
6	Terminal reserves the right to monitor operations of any Vessel to ensure compliance with all applicable law and to notify the appropriate Authority in the event of contravention

7	If the Terminal determines the Vessel poses a risk based upon past performance or other criteria discovered during the vetting process, Terminal may, at its option, require the Vessel to place an independent representative, acceptable to the Terminal company, on board the Vessel to observe loading or discharging operations while the Vessel is moored at the berth. The representative may monitor operations and advise the Vessel's Master regarding avoidance of pollution, unsafe acts, or violation of Terminal regulations. The representative will not direct the undertaking of any particular action or interfere in any way with the Vessel Master's authority. All charges for the representative shall be for the Vessel's account.
8	All Vessels nominated must be capable of operating within the physical limitations of berth dimensions and hard-arm operating envelopes (if applicable) as set by the Terminal from time to time.
9	All Vessels must retain on board sufficient personnel with good working knowledge of the English language to enable operations to be carried out efficiently and safely and to maintain quick, reliable ship/shore communications to cover operations and emergencies.
10	Terminal shall not be liable for any demurrage, loss claims or demands resulting from, or relative to, any act or omission by Authorities or their representatives.

8.3 Responsibilities

As stated in the Safety Letter, responsibility for the safe conduct of operations while the ship is at the SK Energy Marine Terminal rests jointly with the Master of the ship and with the responsible Terminal Representative.

Emphasis is placed on the fact that the completion of a safe and successful cargo transfer operation is dependant upon effective Co-operation, Co-ordination and Communication between all parties involved. All operations should be conducted in the spirit of this mutual agreement.

8.4 Responsibilities for Loading / Unloading

Ship's personnel are advised that responsibility for the loading/unloading operation on board the ship rests solely and absolutely with the Master. It is the responsibility of the ship's personnel control pumping rates, to operate valves and to ensure safe and secure connection of all transfer equipment to the ship's manifold.

Ship's personnel are advised that the responsibility for the discharge or escape of oil from a vessel rests with the ship.

In the event of a prosecution being taken by the appropriate authorities, heavy penalties together with liability for dispersal costs and damages for pollution damage, is provided for by legislation.

Moreover SK Energy Marine Terminal shall not be liable for any costs incurred by a vessel, its owners, charterers or agents as a result of a refusal to load/discharge all or part of nominated shipment, delay to or suspension of loading/discharging, or a requirement to vacate the jetty arising from this terminal regulation, always provided that such cost shall be due to reasons arising from the vessel.

SK Energy Marine Terminal reserves the right to monitor the loading of any vessel to ensure compliance with International Loadline Regulations and to notify the appropriate Authority in the event of contravention. Any charges incurred as a result of overloading and subsequent correction shall be for the vessel's account

8.5 Stopping of cargo handling

Cargo operation shall be stooped whenever ;

1	There is imminent danger of fire or explosion on board the ship or on shore.
2	There are high concentrations of any dangerous gases on or in the vicinity on the ship or berth.
3	It is considered unsafe to continue due to leaks or spillage.
4	There is any emission of sparks or flames from the ships funnel or the continuous emission of dense smoke which suggests serious machinery or equipment malfunction.
5	There is significant electrical or mechanical failure adversely affecting the safety of cargo handling.
6	The ship is found to be violating any safety rules or procedures and fails to take immediate corrective action.
7	There is significant movement of the ship affecting the safety of the transfer connection of the ship.
8	There is a failure of the agreed means of communication between the ship and terminal representative.
9	It is considered unsafe to continue due to the stability, draft, trim or list condition of the ship.
10	Required by the terminal representative.
11	Required by the ship.

9. OPERATIONS ALONGSIDE

9.1 General

All operations at the SK Energy Marine Terminal will be carried out fully in accord with the recommendations contained in the latest edition of the International Safety Guide for Oil Tankers and Terminals (ISGOTT).

9.2 Hose/Arm Disconnection

On completion of mooring alongside the SK Energy Marine Terminal, the ship will be presented with arms/hoses for Cargo operation. It is the responsibility of the shore to ensure that the loading arms are correctly aligned and hoses are manoeuvred and connected safely and are correctly rigged, but the manual assistance of the ship's crew is requested to achieve this. Similarly, on completion of cargo operations, terminal personnel are responsible for ensuring the safe disconnection and manoeuvring of the loading arms and cargo hoses and ship's staff are requested to manually assist with the process, including bolting in place the cargo hose end blanks. Insulated flanges are fitted on all loading arms and hoses and provided for all jetty lines at jetty trestle entrance.

9.3 Tanker/Shore Electrical isolation

Due to possible differences in electrical potential between the tanker and the berth, there is a risk of electrical arcing at the manifold during connection and disconnection of the shore hose or loading arm.

To protect against this risk, there should be a means of electrical isolation at the tanker/shore interface.

9.4 Vessel stability and strength

Vessels berthing at SK Energy Marine Terminal shall maintain following requirement.

1	The vessel's trim and heel must maintain within acceptable limits of her stability. The master of the vessel shall be paid special attention of her trim and heel conditions that may endanger the safe operation of the loading/unloading operation.
2	The vessel's master must ensure that the cargo tanks stability conditions during loading/unloading are maintain within acceptable range.
3	The master of the vessel must ensure that the vessel's stability and strength are adequate for safety performing simultaneously loading/unloading and ballasting/de-ballasting operation.

9.5 Cargo Transfer Rates

The maximum allowable cargo transfer rates will be established and agreed during the pre-transfer conference.

Rates will also be established for starting transfer and will take into account the need for precautions when handling grades defined as static accumulators. If applicable, procedures for the final topping-off of shore tanks will also be established and agreed.

Nominal Diameter		Flow Rate of		
(inch)	(mm)	1 meter/second	7 meter/second	12 meter/second
3″	80 mm	17 ㎥/hour	119 ㎥/hour	197 ㎥/hour
4″	100 mm	29 ㎥/hour	203 ㎥/hour	350 ㎥/hour
6″	150 mm	67 ㎥/hour	469 ㎥/hour	788 ㎥/hour
8″	200 mm	116 ㎥/hour	812 ㎥/hour	1,400 ㎥/hour
10″	250 mm	183 ㎥/hour	1,281 ㎥/hour	2,180 ㎥/hour
12″	305 mm	262 ㎥/hour	1,834 ㎥/hour	3,150 ㎥/hour
14″	360 mm	320 ㎥/hour	2,240 ㎥/hour	4,290 ㎥/hour
16″	410 mm	424 ㎥/hour	2,968 ㎥/hour	5,600 ㎥/hour
18″	460 mm	542 ㎥/hour	3,794 ㎥/hour	7,092 ㎥/hour

(Pressure Surge)

Masters are reminded of the potential for extensive mechanical damage and pollution created by surge pressures. Rapid closure of valves or other sudden constrictions in flow can lead to catastrophic consequences. Changeover between tanks should be conducted in such a manner that surge pressures are not created ; reduced cargo flow rate should be used. If surge pressures occur, cargo transfer will be suspended until the cause is found. Attention is brought to the regulations which clearly state that the vessel will be held accountable for any damage or pollution caused by the actions or failure to act by the Vessel's crew.

9.6 Checks on Quantities Transferred

Unless otherwise agreed during the pre-transfer conference, ships should provide the Terminal with information regarding the amount of cargo that has been transferred by grade every agreed hour. The terminal will provide the ship with comparable shore figures.

If the exchange of information reveals a sudden or significant difference between the terminal and the ship's figures on quantities transferred, operations will be stopped until a satisfactory explanation can be found.

9.7 Emergency Shutdown

Arrangements at the SK Energy Marine Terminal do not include a remote means for stopping shore transfer pumps. In the event of an emergency, the Terminal shall be advised immediately by UHF radio and stating "Emergency Stop! Stop! Stop!".

9.8 Environmental Criteria for Suspending Operations

(SK Berth No. 1~2)

	Suspend Cargo Operations	Disconnect Loading Arms/Hoses	Vessel depart Berth (if safe to do so)
Wind Speed	18 m/sec	18 m/sec	20 m/sec
–	Still air conditions	–	Typhoon track
–	Electrical Storm	–	–

(SK Berth No. 3~7)

	Suspend Cargo Operations	Disconnect Loading Arms/Hoses	Vessel depart Berth (if safe to do so)
Wind Speed	14 m/sec	17 m/sec	21 m/sec
–	Still air conditions	–	Typhoon track
–	Electrical Storm	–	–

Irrespective of measured wind speed(1 Minute Average), if either the ship's Master or the Terminal representative considers that the prevailing conditions potentially threaten the safety of operations, transfer should be suspended and loading arms/hoses disconnected.

9.9 Deck Watch

Cargo operations should be under continuous supervision. Vessels are to have on board at least one Senior Deck Officer (Master or Chief Officer) and one Senior Engineer (Chief or First). In addition, sufficient Officers/crew should be retained on board to cope with any emergency situation.

All personnel should be familiar with the dangers of the products handled. The handling of cargo must be supervised by a responsible ship's Officer. Ship's personnel must not be allowed to take charge of cargo operations or other tanker activities when they are in an intoxicated state or under the influence of drugs.

9.10 Dry Certificates

Ships are advised that Terminal staff or their representatives will not sign any 'Dry Certificate' or other documentation attesting to the condition of ship's tanks on completion of discharge.

9.11 Handling of Ship's Store and Spare Gear

Handling of stores/spare gear is strictly not allowed in SK Energy Marine Terminal during cargo operations but may do so on completion, once loading arms/hoses are disconnected and secured, and with the express approval of the Terminal Representative.

9.12 Tug Boat and Craft Alongside

Except in an emergency or when ordered to assist in mooring, unmooring or maintaining the ship alongside, tugs are forbidden to lie alongside any tanker berthed at SK Energy Marine Terminal. Throughout the period when a tug is alongside, all cargo hatches, ullage ports and other tank opening must be securely closed. Bunkering and supplying fresh water from lighters/barges is not permitted.
Any small craft providing service to a vessel on any our berths shall strictly observe the relevant no naked light requirements as well as other terminal safety requirements and will attend to that vessel on the seaward side. Once personnel have been transferred on board, such craft will proceed to clear away from the vessel.

9.13 Garbage Reception Facilities

There are no facilities at the SK Energy Marine Terminal for the receipt of garbage.

9.14 Potable Water

It is not available to supply fresh water at SK Energy Marine Terminal.

9.15 Bunkers and Lubricating Oils

It is not available to supply bunkers and lubrication oils at SK Energy Marine Terminal.

9.16 Slops and Ballast Reception Facilities

There are no facilities at the SK Energy Marine Terminal for the receipt of slops or dirty ballast ashore

9.17 Ballasting/De-ballasting

Ballasting is a dangerous operation when gas is being expelled from the cargo tank. All items of the ship/shore safety checklist apply until ballasting and cargo operation are completed and the cargo tanks are finally battened down.
De-ballasting may be permitted at all times provided the ballast water is clean and free of oil. It must be clearly understood that the responsibility for avoiding oil pollution rests with the ship. Even segregated ballasted needs to be visually inspected prior de-ballasting.

If vessel need to discharge ballast water, vessel must be opened all ballast tank sampling holeor manhole for inspecting by loading master before berthing and keep a close watch and record “De-ballast water watching record book” every 30 mins and report watching result to terminal every two hours.

All Ballasting / De-ballasting should be operated through Ballast Treatment System.

9.18 Benzene or benzene containing products

Special precautionary measures are to be taken when loading or discharging these hazardous products.

The threshold limit for a product to be handled as benzene is 〉5% benzene.

When the previous cargo contained 〉5% benzene, the vessel has to show benzene free status of cargo tanks, indicating the vapor space in the tanks to be loaded or inspected at our terminal contains 0 ppm benzene vapor.

9.19 Hydrogen Sulfide(H2S)

Hydrogen Sulfide (H2S) is a very toxic, corrosive and flammable gas. It has a very low odor threshold and a distinctive odour of rotten eggs. H2S is colorless and is heavier than air, having a relative vapour density of 1.189. It is soluble in water.
The TLV–TWA for H2S is given as 5 ppm over a period of eight hours.

Many crude oils come out of the well with high levels of hydrogen sulfide (H2S). Hydrogen sulfide can also be encountered in refined products such as naphtha, fuel oil, bunker fuels, bitumens and gas oils.
Special precautionary measures are to be taken when loading or discharging these hazardous products.

9.20 Accident/Incident

Any accident/incident observed by a member of the ship's crew, either on board or on the terminal area, should be reported to the terminal control center at once.

9.21 Communication outside of ship's accommodation area

The use of portable phones and/or cellphones outside the accommodation is prohibited at all time.

9.22 Ship's crew

During operations an adequate number of crew members must remain on board under continuous supervision of a responsible ships officer in order to deal with emergencies. One English or Korean speaking crew member should continuously be in attendance on deck and in contact with the duty officer. He will report any abnormality to the duty officer.

9.23 Boiler fires

So as not to immobilize the vessel, boiler fires shall only be extinguished when the Master in consultation with the Loading Master, decides that the maintaining of boiler fires constitutes an undue hazard.

9.24 Galley Stoves and Other Cooking Equipment

The use of galley stoves and other cooking equipment shall be permitted, provided the Master and Loading Master agree that no hazard exists. LPG stoves are not allowed except of bunkering ship which is not installed generator

10. SAFETY REQUIREMENTS

10.1 Smoking

Smoking is strictly prohibited in the berth area and on board ships alongside the SK Energy Marine Terminal except in those spaces on board that are specifically designated by the Master and Terminal Representative as "Smoking Areas." Notices identifying the designated places must be conspicuously placed.

Failure to comply with this regulation will involve cessation of operations and may result in the ship being removed from the berth pending a complete investigation and receipt of written assurance from the Master that effective controls have been established.

SK Energy Marine Terminal reserves the right, to prohibit smoking, at any time, in any place on board a ship and adjacent to the berth. Smoking is also prohibited in any place within the Terminal and berth areas, except designated areas as directed.

10.2 Use of Matches and Lighters

Under no circumstances are members of the ship's crew allowed to carry matches, lighters, inflammable liquid or any other similar sources of ignition while within the SK Energy Marine Terminal area.

Visitors to ships at the SK Energy Marine Terminal are required to leave matches and lighters at the jetty gate.

10.3 Electronics or E-cigarettes

The exisying smoking rules also apply to the use of electronics or e-cigarettes.

10.4 Drug and Alcohol Policy

All ships chartered by SK Energy or calling at terminals must have an established Drug and Alcohol policy.

Masters are advised that operations will cease if it is considered that the actions of a person or persons involved in operations are not under proper control as a result of the use of alcohol/drugs and or fatigue.

Operations will not resume until the matter has been reported to and fully investigated by relevant authorities and the Terminal Representative considers it safe to do so.

Delay or cancellation of a ship's departure could result.

Access to the SK Energy Marine Terminal will be denied to any person suspected of being affected by alcohol or drugs.

10.5 Portable Electrical Equipment, including Phones and Pagers

Only approved intrinsically safe or EX rated electrical equipment may be used at the SK Energy Marine Terminal or within the hazardous zone of the ship.

Portable electrical equipment, including computers, mobile phones, pagers and cameras, if not certified intrinsically safe, must be switched off and may only be used within:

- Permanent buildings as designated by the Terminal Manager.
- Areas on the ship designated by the Master.

10.6 Environmental Protection

Ships entering the waters of State land must comply with the Korea laws concerning environmental protection, as contained in the Marine Environment Management Act.

The Master of a ship at the SK Energy Marine Terminal must comply with the provisions of the above Act. In particular, he must not:

- Cause or permit of any kind to be discharged from the ship or its scuppers into port waters.
- Cause or permit a person to pump or discharge any oil, spirit or any flammable liquid into port waters.
- Allow the ship to emit excessive funnel smoke and VOC

In the event of any contravention, the Ulsan port authority may instruct offending ships to vacate the berth or prohibit them from returning to Ulsan Port.

10.7 Still Air Conditions

If there is little air movement, petroleum gas may persist on deck in heavy concentrations on ships that are loading volatile products or ballasting tanks that have previously contained volatile products. Consideration may have to be given to stop operations while these conditions persist.

10.8 Electrical Storms

All cargo transfer operations, including the ballasting of non-gas-free cargo tanks will be stopped in the event of an approaching electrical storm. All tank openings, vent outlets, cargo and manifold valves will be closed until such time as the storm has passed

10.9 Fire Fighting Equipment

Fire fighting equipment, fire hoses and extinguishers shall be positioned near the manifold. Fire main systems should be pressurized, or be capable of being pressurized at short notice. Ensure that fire mains can be connected utilizing the international ship/shore connection.

10.10 Tank Hatches

Entry into any cargo tank, ballast tank, void space, and cofferdam is not permitted and tank hatches or any opening to remain securely closed and gastight

11. APPLICABLE TERMINAL REGULATIONS

11.1 Ullaging and Sampling

Ullaging and sampling of ship's tanks should be achieved by the use of closed sampling equipment. Under no circumstances are shore personnel to open any tank or vapour lock without approval from the ship's officer on duty.
Shore staff and surveyors will draw cargo tank ullages and samples immediately after mooring when safe access to the shore is provided. The Master is requested to have adequate personnel and appropriate closed sampling and ullaging equipment available as a priority to facilitate this operation.

11.2 Closed Operations

The loading, discharging and/or ballasting of ship's cargo tanks must be conducted under closed conditions. The use of manual gauging/sampling of cargo tanks via sighting, ullage ports or similar openings is not permitted.

11.3 Inert Gas

If a ship is fitted with an inert gas system then this system must be fully operational (in accordance with Class requirements) and used at all times. In the event that a ship's inert gas system is not functioning, or not functioning as required, cargo operations must cease immediately and may not resume until the system is repaired or written permission is given from the ship's owners, the Ulsan Port Authority and the Terminal Representative.

When carrying volatile petroleum, every existing tanker of 40,000 Dwt. and upwards and every existing tanker between 20,000 and 40,000 Dwt. fitted with high pressure tank washing machines (capacity greater than 60m3/hour) must be fitted with an Inert Gas System. This system must be operated effectively to maintain the atmosphere in the cargo tanks non–flammable at all times when volatile petroleum (see definition) is carried or when the cargo tanks are not gas freed.
The I.G. System must be capable of delivering inert gas with oxygen content of not more than 5% by volume in the inert gas supply main. The atmosphere in the cargo tanks must at all times be maintained at a positive pressure and the oxygen content not exceeding 8% by volume.

In the event of failure of the I.G. System in port, it is the responsibility of the Master to

immediately suspend cargo and deballasting operations and notify the Port Master and Loading Master.
In the event of I.G. plant failure, prior to or during cargo or ballast discharge, discharge should not commence or continue until I.G. plant operation is restored, or an alternative source of I.G. is provided.

11.4 State of readiness of Main Engines

The main engines and other essential machinery of all ships alongside must be maintained in a state of readiness for vacating the berth at short notice.
Main engines must be retained on a short notice(15/30 min) of readiness. The immobilisation of main engines or other essential machinery may be permitted upon application to the Ulsan port authority and with the permission of the Terminal Representative. The ship will be required to provide a detailed description of the work being undertaken and an estimation of the actual time of immobilization.

11.5 Maintenance and Repair Work Onboard

All electrical equipment repair & maintenance work during staying at our terminal are not allowed. Emergency repairs, namely essential repairs needed to rectify malfunctioning equipment and prevent hazardous or unsafe conditions, will be permitted on a case-by-case basis following approval by the Terminal Representative.

11.6 Hot Work on Board

Hot work is not permitted on board ships alongside the SK Energy Marine Terminal.

11.7 Tank Cleaning, Purging and Gas Freeing

Tank cleaning, gas freeing or purging operations are not permitted on board any ships while alongside the SK Energy Marine Terminal.

11.8 Crude Oil Washing

Normally the terminal permit for the vessels to conduct COW with minimized numbers of tank (25% only) as required in C/P and MARPOL 73/78. If need to carry out COW for more tanks, it should be informed with good reasons and agreed by the terminal in advance.
Terminal will ask to check oxygen contents prior to commencing COW and to keep it within the safe ranges through the operation.

Unless otherwise expressly requested/permitted, COW operation should be conducted concurrently with unloading cargo.

11.9 Tank entry

Tank entry is not allowed. When tank entry is imperative, this is only acceptable under the following conditions:

- Charterer (buyer) has to ensure the necessity the cargo surveyor has to enter the vessels tank for inspection prior to loading.
- Charterer (buyer) has to inform the terminal about the requirements for inside tank inspection by a surveyor accompanied with background information.
- Tank entry has to be carried out according the ISGOTT 5th edition, chapter 10 procedures and tank entry permit.
- If ISGOTT tank entry procedures can't be used, the master has to supply terminal ship tank entry procedures to be including relevant documents.

11.10 Prevention of sparking

Opening and closing hatches, connecting and disconnecting hard arms and any other operation on deck involving metal tools shall be carried out in such a manner to avoid generation of sparks.
During operations, no maintenance activities are allowed on deck and Ship's crew shall be used Non-Spark tool.

11.11 High Place Work

All 'High Place Work(Over 2 Meters from Deck)' is strictly prohibited on board any ships whilst alongside the jetty.

11.12 High level alarms(over-fill alarm) and P/V venting

Every vessel involved in cargo operations alongside the terminal should have operational cargo tank high level alarms(over-fill alarms) fitted that are independent from the main gauging system. Alarms and P/V valves should be tested prior to operation and be operational both during loading and discharging operations.

11.13 Notices on the tanker

On arrival at a terminal, a tanker should display notices at the gangway in appropriate languages stating:

- WARNING
- NO NAKED LIGHT

- NO SMOKING
- NO UNAUTHORISED PERSONS
- NO USE OF MOBILE PHONES WITHOUT MASTER'S PERMISSION

Shore personnel should also observe these requirements when on board the tanker. Photoluminescent notices stating 'EMERGENCY ESCAPE ROUTE' together with directional signs, should also be displayed at appropriate locations.

11.14 Notices on the terminal

Permanent notices and signs indicating that smoking and naked lights are prohibited should be conspicuously displayed on a jetty in appropriate languages. Similar permanent notices and signs should be displayed at the entrance to the terminal area or the shore approaches to a jetty.

In buildings and other shore locations where smoking is allowed, appropriate notices should be conspicuously displayed.

Emergency escape routes from the tanker berth to the shore should be clearly indicated.

11.15 Ship's Radar and Radio Transmitters

Ship's radar and MF/HF radio station transmission equipments, satellite & etc, except permanently shall not be used while alongside.

Satellite equipment normally operates at 1.6 GHz and the power levels generated are not sufficient to present an ignition hazard. Satellite communications equipment may therefore be used to transmit and receive messages in port.

UHF/VHF transmission power should maintain low power(1w) during cargo operation at berth.

Also, AIS VHF transmission power should maintain low power(1w) during cargo operation at berth otherwise power off.

12. POLLUTION PREVENTION

12.1 Causes of Pollution

Experience has shown that the majority of the causes of pollution by ships are as followed:

- Overflow of cargo from tanks during loading/discharge(e.g. open drop line valves, changing of trim, slop tank overflow)
- Overflow of ballast water
- Leakage of oil through sea valves at commencement of ballasting
- Failure of flanges and joints in manifolds and deck pipework
- Spillage of oil after fire/explosion
- Discharging oily water during operating EGCS.

Consequently, Master is required to draw the special attention of deck crew to these causes.

12.2 Emergency Oil Pollution Clean-up

Whenever oil is spilled and pollution of the sea occurs or may occur, immediate action must be taken to prevent further spillage and to minimize clean-up operations.

12.3 Scuppers

Scuppers must always be closed and made oil tight before operations commence.

12.4 Water freeing Deck

All surplus rainwater or clean water spilling on the deck from such as ballasting operations must be drained of periodically and scupper plugs replaced and resealed immediately after the water has been run off. Continuous monitoring during this time is required.

12.5 Unused Cargo/Bunker Connections

All unused cargo and bunker connections shall be closed and blanked off using a fully bolted blank flange.

12.6 Overboard Valves and Sea Valves

All overboard valves and sea valves not being used shall be closed and lashed or sealed. Over board discharge lines which have a swing–blind arrangement shall be blinded.

12.7 Drip Pans and Trays

It is the ship's responsibility to provide drip pans and trays under the manifold connections and to keep pans or trays emptied or drained.

12.8 Pollution control of harbor water

No hydrocarbons or ballast water containing hydrocarbons or chemicals shall be discharged or allowed to escape from any vessel in to the harbor.

12.9 Prohibit of discharging material to overboard

It's strictly prohibited to throw any material, litter, waste or goods either solid or liquid, overboard. The master of the vessel in conjunction with the ship's agent, should make arrangements for disposal of such material if required. Litter from ship's left behind on the jetty or its surroundings will be removed on ship's account.

12.10 Excessive smoke

Excessive smoke from vessel's funnel and soot blowing is strictly prohibited by local authorities. Vessel's master and chief engineer must control excessive smoke from funnel during staying at our terminal.

12.11 Oil Absorbing Material

The ship shall keep an adequate supply of sawdust or other oil absorbing material ready for immediate use.

12.12 Adequate Deck Watch

The ship shall have an adequate deck watch during all cargo and ballasting operations. The Emergency Stop procedure must be clearly understood and agreed by ship and shore.

12.13 Maximum Allowable Pressure at Manifold

Never exceed the maximum allowable backpressure at ship's rail as specified in the 'Pre-loading/discharge Plan Agreement'. Make sure the loading/discharge rate is fully understood and agreed.

12.14 Topping Off Operations (including Tanks switching operations)

When topping-off cargo and bunker tanks, the ship's officer in charge shall be in control of the operation, have adequate assistance from his experienced crew and have the berth operator standing by to reduce the loading rate or stop loading as required.

12.15 Check on Tanks After Topping Off

Cargo tanks that have been topped up must be checked frequently during the remainder of the loading to avoid an overflow due to an improper shut or leaking valve.

13. SBM(Single Buoy Mooring)

13.1 Emergency Procedures

(1) Action in case of fire on board

1	Cease all cargo operations and close manifold, butterfly, SPM and PLEM valves.
2	Summon ships fire party to action.
3	Inform to the mooring master on board
4	Inform " Vessel Traffic Service Center" on VHF Channel 14.
5	Disconnect cargo hoses.
6	Bring engines to stand-by.

(2) Action in case of mooring rope damage.

1	Cease all cargo operation immediately. Shut manifold valves on board, butterfly valves on cargo hoses and SPM valves.
2	Inform the mooring master on board.
3	Contact "Ulsan Pilots" and Agents on VHF Channel 13 for pilot and tugs.
4	Bring engines to stand-by.
5	Master to bridge with walkie talkie.
6	Ship/shore crew disconnect hoses and lower same into the sea.
7	Mooring master and ship's officer with ship and shore mooring crew to forward station maintaining walkie talkie contact with bridge. Keep the vessel in appropriate position by using her engine and tailing tug.
8	Mooring boat clears hoses away from vessel's side.
9	Master in consultation with mooring master casts off moorings and anchors vessel in appropriate anchorage. Keep Ulsan Pilots advised on situation.

(3) Action in case of hose rupture only

–	Inform the mooring master on board & discuss following procedure.
1	Cease all cargo operations immediately
2	Displace hose content with water if possible.
3	Inform " Vessel Traffic Service Center " on VHF Channel 14.

4	Stop all pumps and shut manifold and appropriate valves on hoses and SPM.
5	Disconnect hose(s) and lower it into the sea.

(4) Action in case of broken mooring and hose rupture

1	Cease all cargo operations immediately.
2	Inform the mooring master on board.
3	Inform " Vessel Traffic Service Center " on VHF Channel 14 and contact "Ulsan Pilots" and "Agents" on VHF Channel 13 for pilot and tugs.
4	Ship and shore mooring crew are stationed on the forward, Master is stationed on the bridge and all parties keep contact with walkie-talkies.
5	If situation permits, hose content to be displaced with water and then shut manifold and appropriate hose/pipeline valves. If not, shut manifold and appropriate valves along hose/pipeline. Keep in appropriate position by using her engines and tailing tug.
6	Disconnect hoses and lower it into the sea.
7	After the Master in consultation with mooring master, he give orders for casts off all lines from SPM.
8	Mooring boats are clear ropes and hoses from the ship's side and the vessel is maneuvered to the proper anchorage.

(5) Action in case of oil spill

1	Cease all cargo operations and deal with the source.
2	All reasonable steps must be taken to recover the spilt oil on board.
3	Inform the mooring master on board and also "Vessel Traffic Service Center" on VHF Channel 14 to request for assistance.

(6) Action in case of IG system failure

1	Cease all cargo operations immediately.
2	Inform the mooring master on board.
3	Immediate action should be taken to rectify the fault.
4	If repairs to the system cannot be completed within a reasonable time, the vessel will be removed from the SPM

13.2 General Information

This terminal is the Single Point Mooring type and it is generally called Catenary Anchor Leg Mooring System (CALM).

(1) No.2 Buoy Particular

Classification		Buoy
1	LOCATION	35-26-19.6N, 129-23-36.3E
2	Min. DWT	80,000 DWT
3	Max. DWT	325,000 DWT
4	SEA DEPTH	24.40 M
5	DRAFT RESTRICTION	21.21 M
6	BUOY SIZE / WEIGHT	DIA 12.0 M x H5.3 M / 250 TON
7	BUOY LIGHT	Q (4) 6s, visibility 9 miles or more
8	FOG HORN	2 sec. Blast, Period 18 sec., Range 1 mile.
9	RADAR REFLECTOR	On the mast ofthe buoy.
10	SWING CIRCLE RANGE WITH TAILING TUG	400 M

(2) No.3 Buoy Particular

Classification		Buoy
1	LOCATION	35-25-46.2N, 129-23-35.6E
2	Min. DWT	80,000 DWT
3	Max. DWT	325,000 DWT
4	SEA DEPTH	26.50 M
5	DRAFT RESTRICTION	23.04 M
6	BUOY SIZE / WEIGHT	DIA 12.0 M x H5.3 M / 243 TON
7	BUOY LIGHT	Q (3) 5s, visibility 9 miles or more
8	FOG HORN	2 sec. Blast, Period 18 sec., Range 1 mile.
9	RADAR REFLECTOR	On the mast of the buoy.
10	RACON	On the mast of the buoy.
11	SWING CIRCLE RANGE WITH TAILING TUG	500 M

(3) Operational Criteria

Item	To Berth	To Stop Cargo Operation & Unberth
Max. Wind Velocity	14.0 m/sec or less	Over 21.0 m/sec (Ave. during 10 Min.)
Max. Wave Height	2.0 m or less	Over 3.0 m
Visibility	500 m	500 m
Max. Tension of mooring rope	–	40 ~ 49 tons 1 time Within 10 Min. 50 ~ 59 tons 1 time Within 20 Min. Over 60 tons

*) Mooring master will make a decision considering directions of wind/swell as well as frequencies and strength of mooring rope tension.

**) During electric storms, It is the joint responsibility of the vessel and the terminal, whoever first sights presence of lightening, must call to stop cargo operations due to safety reasons.

(4) SBM Hoses(Same as No.2/3 Buoy)

Hose	Submarine Hose	Float Hose
Left–Line(inner)	24″ x 3 ea x 33 m	16″~24″ x 25 ea x 299 m
Right–Line(outer)	24″ x 3 ea x 33 m	6″~24″ x 26 ea x 311 m

*) 5 white winker lights equally spaced along 311 meters of Right–Line hose, Connection Flange: 16^2, ANSI 150, Camlock flange.

(5) SBM Mooring Hawsers(Same as No.2/3 Buoy)

The mooring system consists of the following parts:

Item	Size
Mooring Bridle Assembly	Complete With Large & Small Triangle Plate, Enlarged Link, Adaptation Link, EndJoint Shackle, SWL 200 Tons. Central Bolt & Nut 74 x 120 mm
Mooring Main Rope	8–Strand Multi plait Polyester & Polypropylene Rope 18″ CIRC x 54.8 M, MBL 414 Tons.
Tanker Side Chafe Chain	“B”TYPE, 76 MM x 7,981 MM, SWL 200 Tons, MBL 498 Tons.
Support Buoy	Length : 2,000 MM, Core: PEPOAM, SKIN : 12 MM PU ELASTOMER.
Pick–Up Line	10″ CIRC. x 80 M

13.3 Arrival

(1) Pilot on board

Pilotage is compulsory and vessel should call "Ulsan Pilots", who works on VHF Channel 13, 2 hours before arrival. Pilot boards vessel approximately 3.5 miles S.E. of the Buoy, and will direct the vessel to the buoy, after cleared from customs.

(2) Approaching

1	Whilst approaching the terminal from the pilot boarding area the vessel will be maneuvered by pilot, and SK Energy mooring master will come on board at a designated place (normally 1 mile off the buoy) together with mooring crew. Portside crane needs to be rigged up for lifting the mooring toolbox.
2	The seaward approach to the Buoy mooring site is free of underwater obstructions and the existing landmarks and navigation aids are adequate for precision navigations. Depth of water is more than 24 meters in the approaches.
3	Seabed at the mooring site is covered with soft mud to a depth of four to six feet.

(3) Anchoring

1	Any VLCC scheduled to mooring at SK Energy Terminal SBM buoy is not allowed her anchoring in Ulsan port.
2	Vessel's bow anchors are to be properly secured into the hawse pipes by the anchor stoppers and wires before reaching the buoy to prevent accidental dropping which will result the damage to the buoy and underwater pipelines.

(4) Terminal closure

1	The terminal is closed when the weather is too rough for incoming vessel to berth. The decision regarding the opening and closing of the terminal is rested with SK Energy mooring master.
2	The terminal will not be opened, until the Port Authority officially announces that the prevailing typhoon is cleared and the port closure is lifted, in case the port was closed and the terminal was evacuated due to typhoon.

13.4 Mooring/Unmooring

(1) Mooring/Unmooring

1	Vessels can be moored DAYTIME ONLY; Master should arrive at the port and tender the notice of readiness 3 HOURS before sunset for daytime berthing.
2	Vessels can be unmoored at anytime for sailing. Therefore, unmooring is carried out day or night upon completion of cargo operation

3	The SK Energy mooring master will board the vessel with mooring crews at the designated position, approximately 0.5 mile off the buoy and will act solely in an advisory capacity for mooring and unmooring operation in order to assist the master.
4	Normally, line handling including (un)mooring, (dis)connecting of cargo hoses is performed by shore crew, but vessel's qualified officer and crews should attend the works.
5	Two tugs assist with mooring and one tug with unmooring operations.
6	Two boats are in attendance during mooring and unmooring operation. One/Two boat will keep the hoses clear while the other handles the mooring ropes.
7	Although the weather is generally favourable in the area, during each change of tide/wind the vessel tends to ride up on the buoy. To avoid such a hazardous situation, one tail tug is on stand-by during a vessel moored, but vessel's engine must always remain ready with full power for immediate use. The hiring of the tail tug is normally on the Terminal's account, however it will be on owner's account for the period when cargo operation is suspended or delayed by vessel's fault.

(2) Hose Connection

1	The support vessel should tow the end of the hose string to a position directly underneath the tanker's crane and connect the hook to the hose lifting chain. The support vessel should then move clear of the lifting area.
2	Before the hose is lifted above the deck, it should first be raised to deck level so that the mooring master can make a visual inspection of the security and condition of the lifting equipment.
3	The hose should then be lifted above deck level to enable the hang off(snubbing) chain to be passed inboard through a fairlead and secured to a suitable deck fitting.
4	The hang off(snubbing) chain length is adjusted so that the hose presentation flange will lower into a position just inboard of the tanker manifold flange. This will ensure the full weight of the hose is supported by the snubbing chain and that the hose lies in a smooth curve, slightly clear of the tanker rail.
5	Lateral hose movement can be restricted by loosely securing the hose to the tanker rail using turns of fiber rope or a webbing strop. This will also assist in lining up the hose to the manifold flange.
6	The hose presentation flange should be lowered to the manifold working platform. Before removing the blind flange, check that the hose end valves are fully closed and that the terminal has confirmed that the hoses are depressurized.
7	The hose flange is lifted to the tanker manifold using the crane and manoeuvred into position using appropriate rigging equipment.
8	The hose connection is completed using a new gasket and full set of bolts with an O-ring seal.
9	A second, aft, hose may then be connected in the same manner.
10	Finally, hose end valves should be mechanically locked in the open position.
11	An SBM hose string that is not to be used for the operation may be secured at deck level ready to slip

(3) Hose Disconnection

1	The aft hose should be disconnected first, in the reverse order to connection.
2	The crane should take the weight of the hose and flange at the manifold. The Bolts can then be loosened and removed.
3	After release, the hose end should be pulled clear of the manifold using rigging equipment as required.
4	The hose end valve and a flange O-ring should be inspected before refitting and tightening the blind flange.
5	The hose should be lifted vertically until the weight comes off the snubbing chain which may then be released.
6	The hose should be lowered so that the flange is adjacent to the tanker rail.
7	The second hose string should be disconnected using the same procedure.
8	Before the tanker departs, either: Lower the hoses to the support vessel and tow them clear, or Slip the hoses at water level into the sea directly from the ship ropes as the tanker moves astern, clear of the berth, so that they do not foul the tanker's propellers. This method does not require the use of a support vessel and may be preferred in adverse weather conditions.

(4) Emergency Departure

In the event that it becomes necessary for the vessel to vacate in an emergency or without the aid of the service boat, the following steps should be taken :

- Stop the transfer of cargo. Shut down all cargo pumps.
- Close the vessel's manifold valves and the butterfly valves at hose ends.
- Take the weight of the hose on the vessel's crane and release the hose from the vessels manifold.
- Cover up hose with blind flange. If time does not permit this, the closed butterfly valves are sufficient.
- Stripe off all stopper on the rail hose.
- Swing the hose outboard, lower to the water and release.
- The vessel can now slip from the Buoy

13.5 Cargo Operation

(1) Unloading Procedures

mooring master will provide vessel with a copy of "Cargo Unloading Procedures", which include information and instructions for safe unloading of cargo.

(2) Cargo Survey

1	Cargo surveyor will be on board for cargo measurement and for inspection of cargo compartment.
2	Slop oil and BS & W shall be subtracted from the quantity of cargo.
3	When the cargoes have been discharged, cargo surveyor will inspect all cargo tanks and sign on the dry certificate if he find all cargo discharged and all cargo tanks empty.

(3) Cargo Sampling

1	Terminal personnel will also be onboard prior to cargo unloading for sampling of cargo.
2	Load port cargo samples are to be collected by terminal.

(4) Crude Oil Washing

1	Normally the terminal permit for the vessels to conduct COW with minimized numbers of tank (25% only) as required in C/P and MARPOL 73/78. If need to carry out COW for more tanks, it should be informed with good reasons and agreed by the terminal in advance.
2	Terminal will ask to check oxygen contents prior to commencing COW and to keep it within the safe ranges through the operation.
3	Unless otherwise expressly requested/permitted, COW operation should be conducted concurrently with unloading cargo.

(5) Inert Gas System

1	When the vessel is unable to maintain the oxygen content below 8% by volume in cargo tanks by trouble of the inert gas system or any other reasons, all cargo handling should not be started.
2	If a normal operation of the inert gas system cannot be maintained, The mooring master should be informed immediately and unloading operation should be stopped before the tanks come under negative pressure.
3	When the inert gas system fails, the vessel should make an effort to repair and to restore it to normality, and should inform the cause of the trouble and the time required for the repair to mooring master. The cargo unloading operation should not be resumed until the inert gas system has been restored to normality.

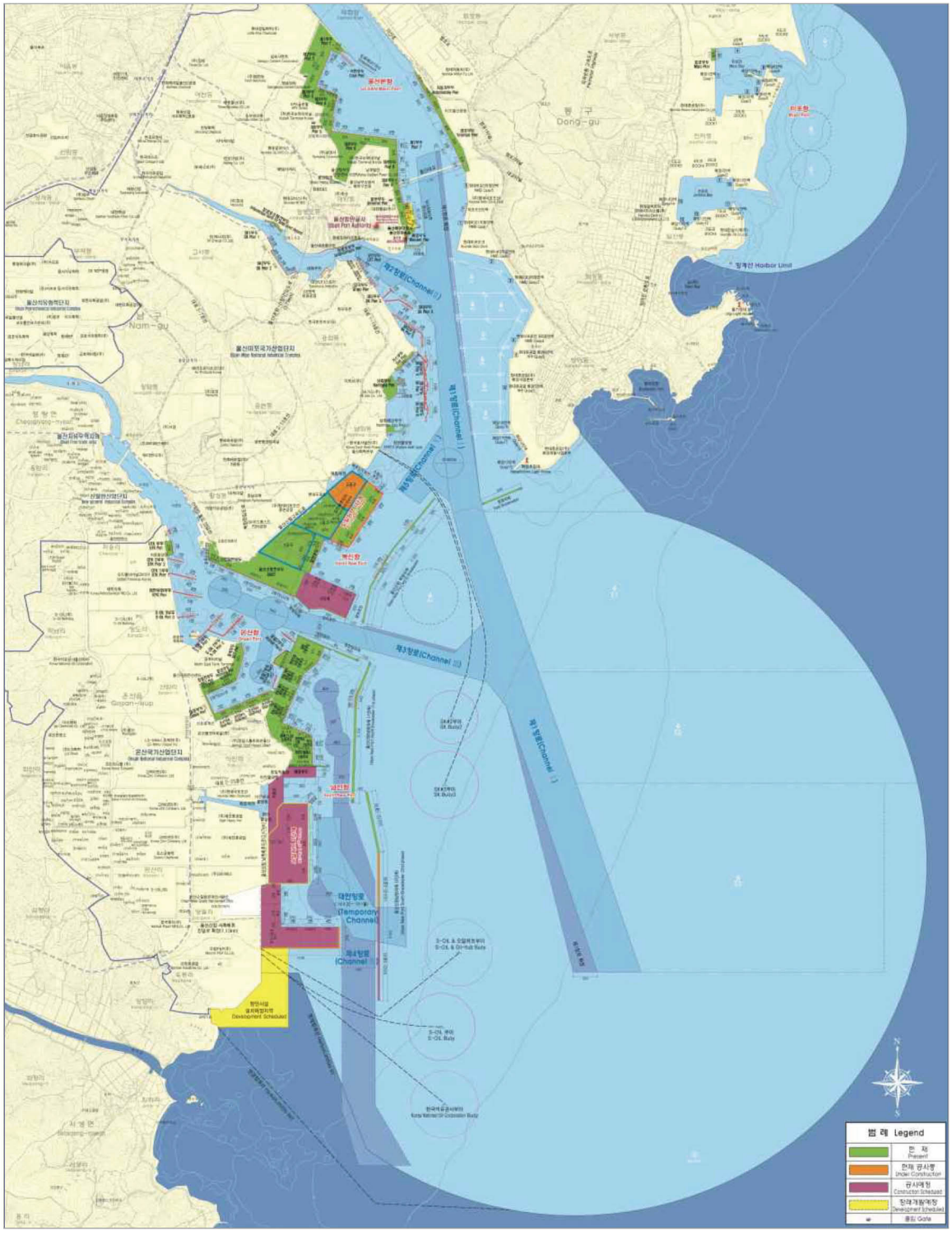
(6) Minimum Deadweight

In order to minimize vertical loading forces on the SPM and to maneuver safely in a prevailing weather, it is a terminal requirement that:

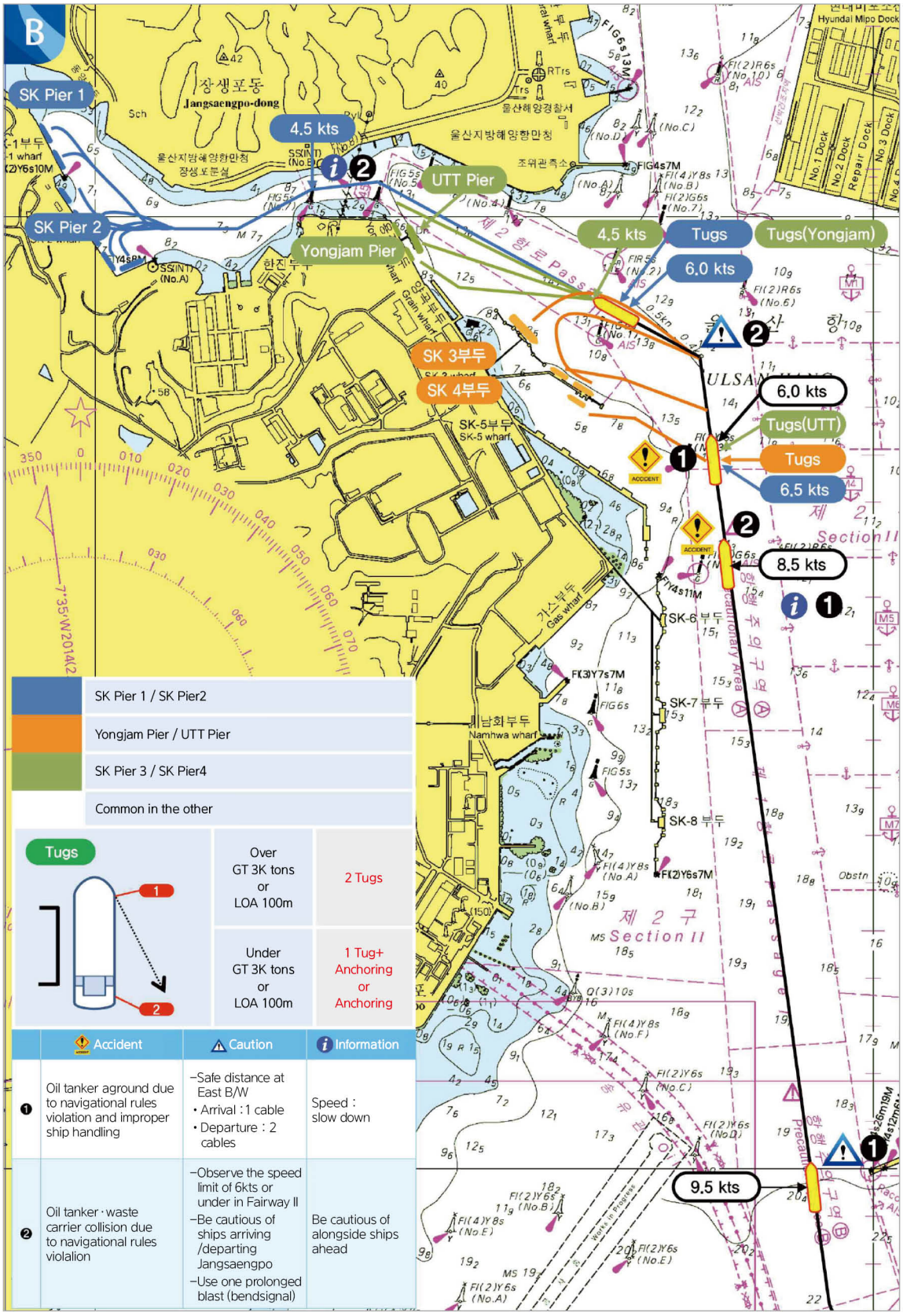
- At no time the vessels' trim exceed 6 meters by the stern.
- At no time the amount of cargo and/or ballast should be less than 30% of her deadweight. However, during the adverse weather approximately 40% of her deadweight may be required.
- Vessel's forward draft should be maintained more than 7 meters while at the berth. (The center of bulbous bow should be submerged.)

APPENDICES

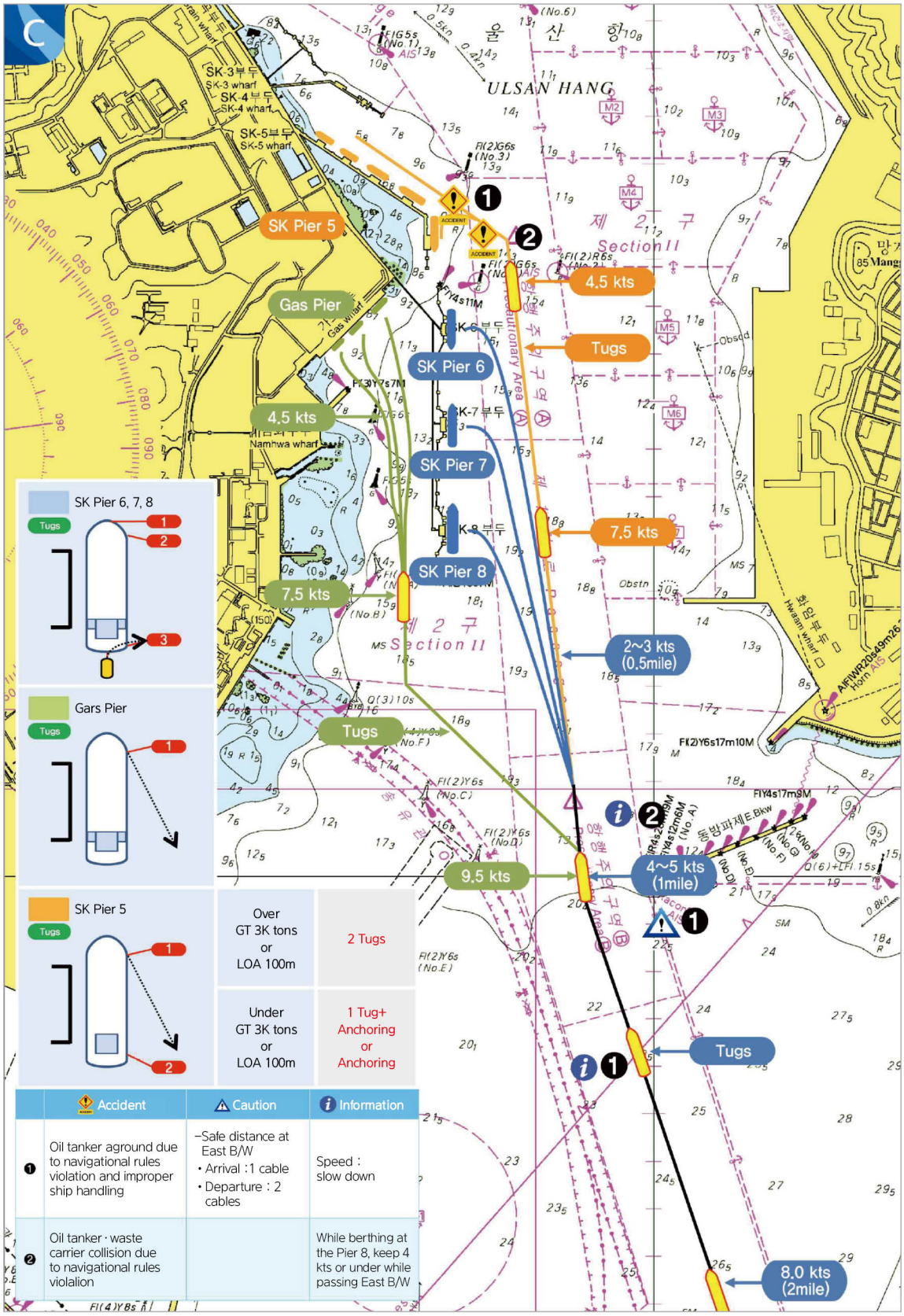
A. Plan of Ulsan Port Layout

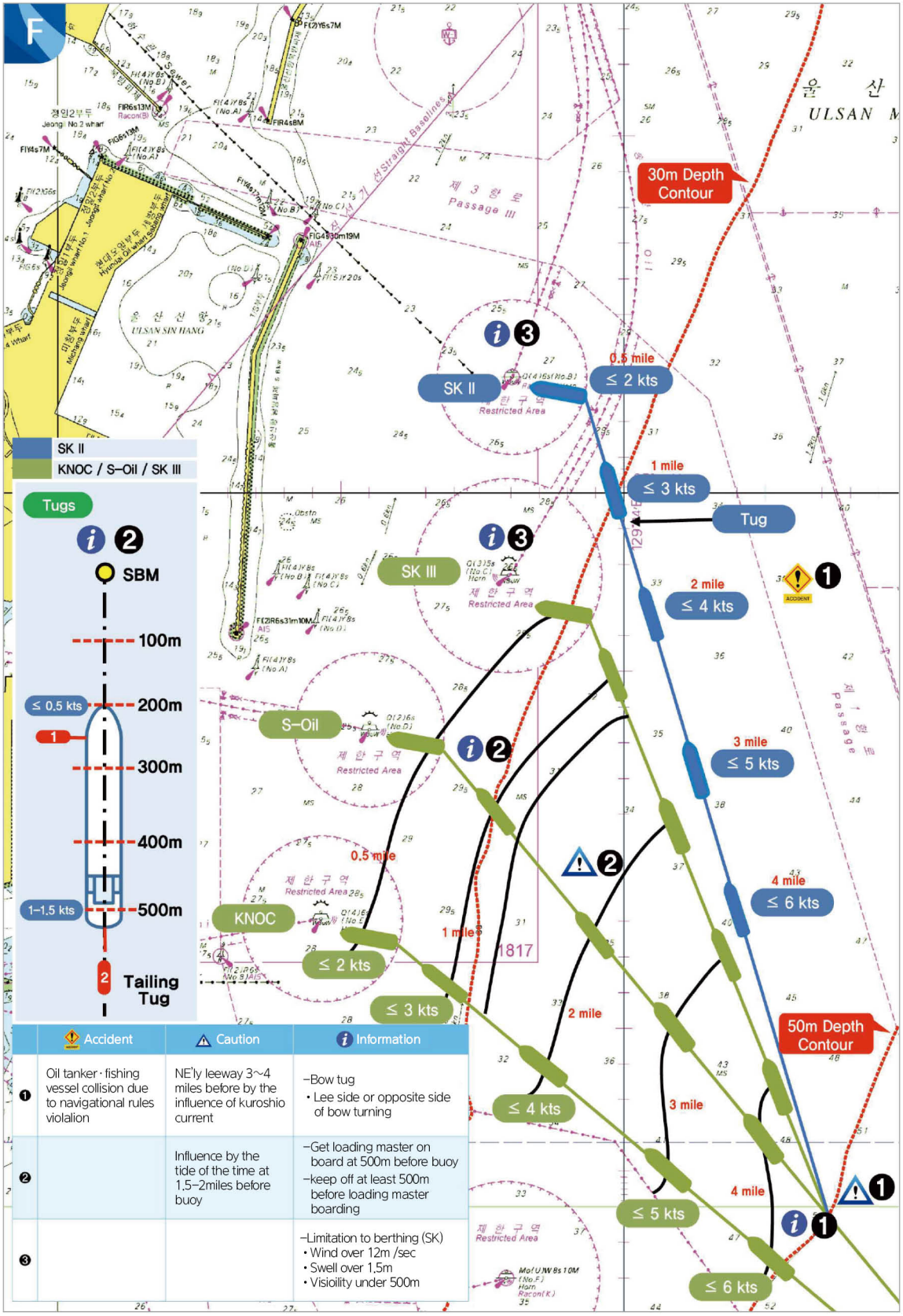


B. Safety Navigation Guide[1)]



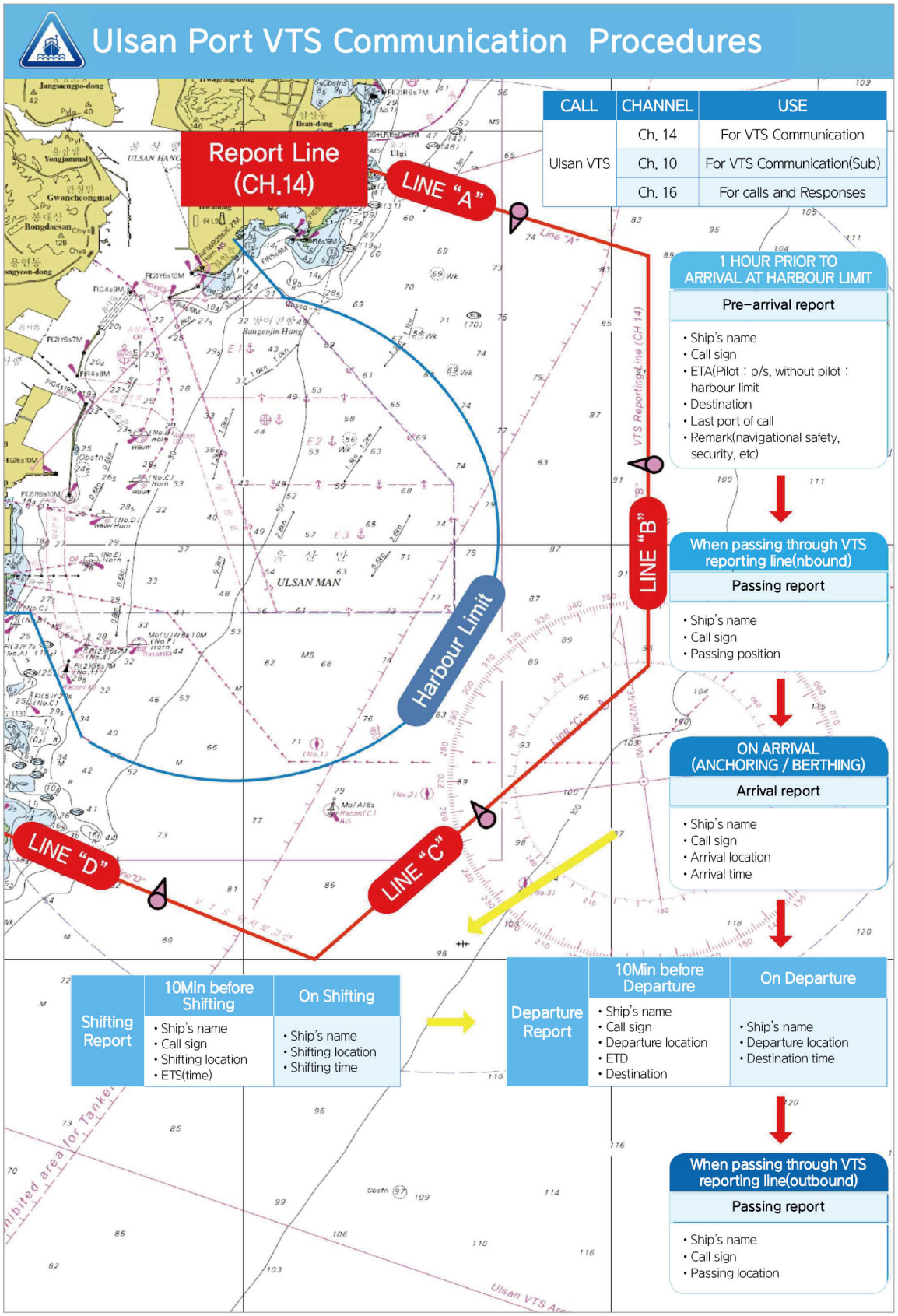
1) Appendix B. C. and D are excerpts from the "Safety Navigation Guide f or Oil Tankers(Ulsan Port) 2015.12." published by the Ministry Of Oceans And Fisheries. this guideline should be used olny for reference purpose.


C
ULSAN HANG
SK-3부두
SK-3 wharf
SK-4부두
SK-4 wharf
SK-5부두
SK-5 wharf
SK Pier 5
Gas Pier
Gas Wharf
SK Pier 6
SK Pier 7
SK Pier 8
Namhwa wharf
4.5 kts
7.5 kts
Tugs
2~3 kts
(0.5mile)
4~5 kts
(1mile)
9.5 kts
8.0 kts
(2mile)
Section II
Precautionary Area
Hwaam wharf
SK Pier 6, 7, 8
Tugs
Gars Pier
SK Pier 5
Over
GT 3K tons
or
LOA 100m
2 Tugs
Under
GT 3K tons
or
LOA 100m
1 Tug+
Anchoring
or
Anchoring
Accident
Caution
Information
Oil tanker aground due to navigational rules violation and improper ship handling
–Safe distance at East B/W
• Arrival : 1 cable
• Departure : 2 cables
Speed : slow down
Oil tanker · waste carrier collision due to navigational rules violalion
While berthing at the Pier 8, keep 4 kts or under while passing East B/W

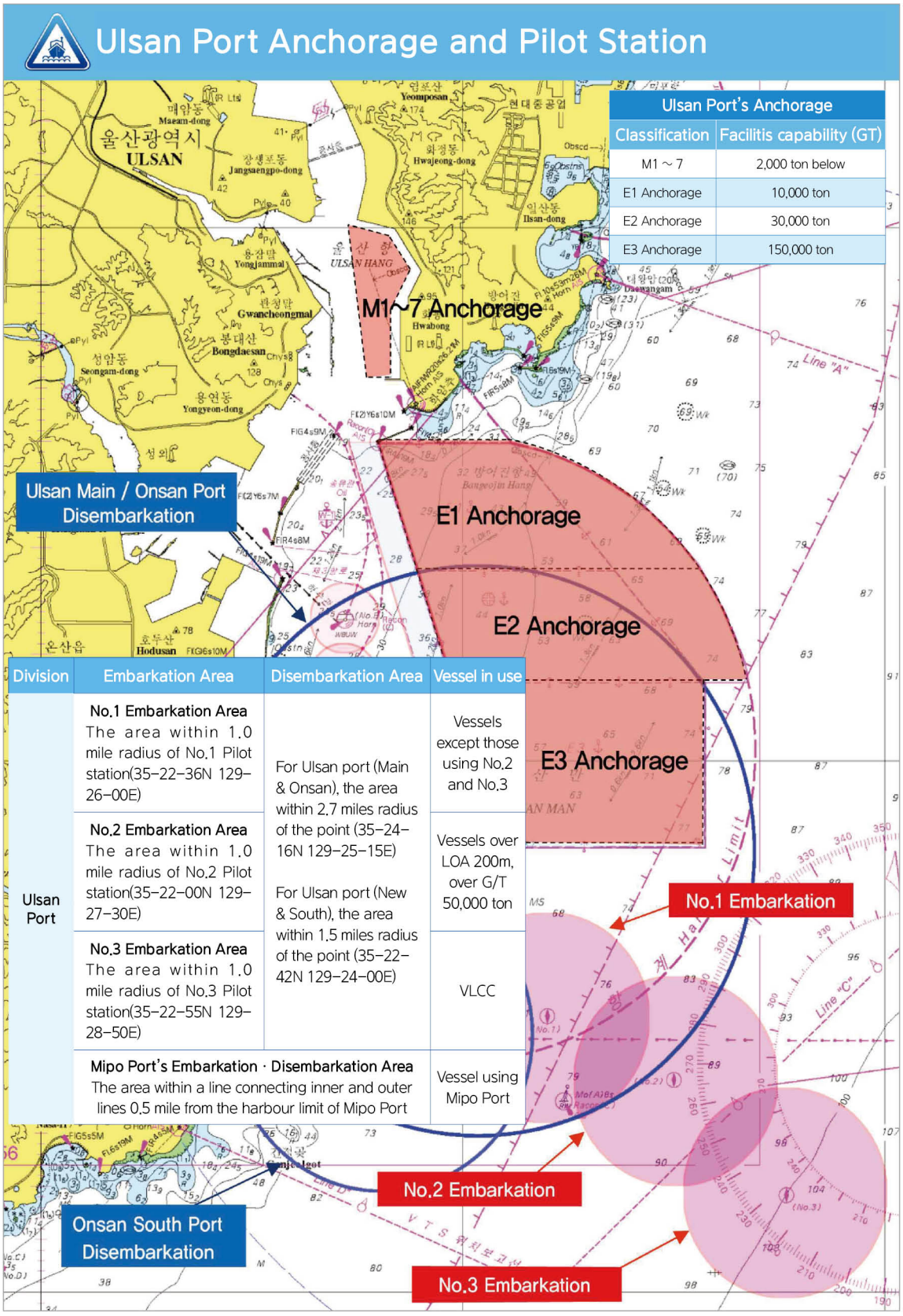


	Accident	Caution	Information
❶	Oil tanker · fishing vessel collision due to navigational rules violalion	NE'ly leeway 3~4 miles before by the influence of kuroshio current	–Bow tug • Lee side or opposite side of bow turning
❷		Influence by the tide of the time at 1.5–2miles before buoy	–Get loading master on board at 500m before buoy –keep off at least 500m before loading master boarding
❸			–Limitation to berthing (SK) • Wind over 12m /sec • Swell over 1.5m • Visiolity under 500m

C. Ulsan Port VTS Communication Procedures



D. Ulsan Port Anchorage and Pilot Station

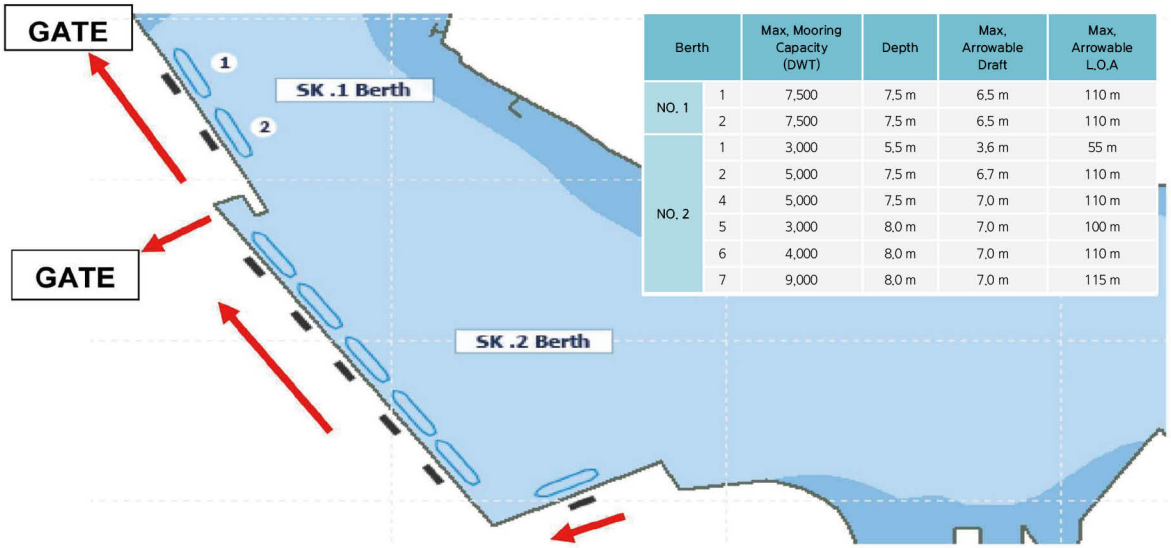


E. Tug Assignment Guideline

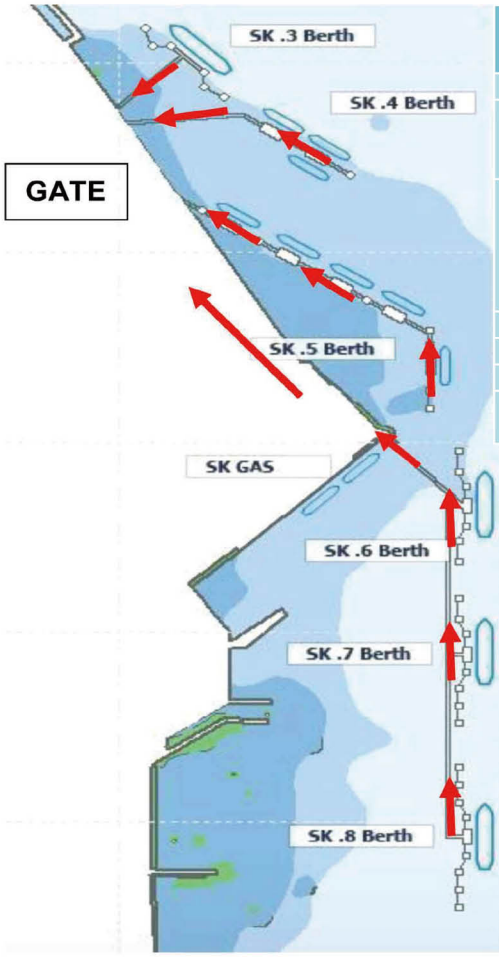
<table>
<tr><th colspan="2" rowspan="2">Berthing · Unberthing
Tonnage of a ship</th><th colspan="3">Criteria of tugboat use</th></tr>
<tr><th>Horsepower level(HP)</th><th colspan="2">Gross horsepower(HP)</th></tr>
<tr><td colspan="2">Under 5,000 ton</td><td>1,000 HP level</td><td colspan="2">Under 2,000 HP</td></tr>
<tr><td colspan="2">Over 5,000 ton</td><td>1,000 HP level</td><td colspan="2">Over 2,000 HP</td></tr>
<tr><td colspan="2">10,000 ton ~ 20,000 ton</td><td>2,000 HP level</td><td colspan="2">Over 4,000 HP</td></tr>
<tr><td colspan="2">20,000 ton ~ 30,000 ton</td><td>2,000 HP level, 3,000 HP level</td><td colspan="2">Over 5,000 HP</td></tr>
<tr><td colspan="2">30,000 ton ~ 50,000 ton</td><td>3,000 HP level, 4,000 HP level</td><td colspan="2">Over 7,000 HP</td></tr>
<tr><td colspan="2">50,000 ton ~ 70,000 ton</td><td>4,000 HP level, 5,000 HP level</td><td colspan="2">Over 8,000 HP</td></tr>
<tr><td colspan="2">70,000 ton ~ 100,000 ton</td><td>4,000~6,000 HP level</td><td colspan="2">Over 10,000 HP</td></tr>
<tr><td colspan="2">Over 100,000 ton</td><td>5,000 HP level, 6,000 HP level</td><td colspan="2">Over 13,500 HP</td></tr>
<tr><td rowspan="4">SBM</td><td rowspan="2">Under
90,000 ton</td><td rowspan="2">4,000~6,000 HP level,
4,000 HP level</td><td>Berththing</td><td>Over 9,000 HP</td></tr>
<tr><td>Unberthing</td><td>Over 4,000 HP</td></tr>
<tr><td rowspan="2">Over
90,000 ton</td><td rowspan="2">4,000~6,000 HP level,
4,000 HP level</td><td>Berththing</td><td>Over 10,000 HP</td></tr>
<tr><td>Unberthing</td><td>Over 4,000 HP</td></tr>
</table>

Level	
1,000 HP level	1,000 ≤ ~ < 1,999 HP
2,000 HP level	2,000 ≤ ~ < 2,999 HP
3,000 HP level	3,000 ≤ ~ < 3,999 HP
4,000 HP level	4,000 ≤ ~ < 4,999 HP
5,000 HP level	5,000 ≤ ~ < 5,999 HP
6,300 HP level	6,000 HP

F. Terminal Layout & Emergency evacuation route



Berth		Max, Mooring Capacity (DWT)	Depth	Max, Arrowable Draft	Max, Arrowable L.O.A
NO. 1	1	7,500	7.5 m	6.5 m	110 m
	2	7,500	7.5 m	6.5 m	110 m
NO. 2	1	3,000	5.5 m	3.6 m	55 m
	2	5,000	7.5 m	6.7 m	110 m
	4	5,000	7.5 m	7.0 m	110 m
	5	3,000	8.0 m	7.0 m	100 m
	6	4,000	8.0 m	7.0 m	110 m
	7	9,000	8.0 m	7.0 m	115 m



Berth		Max, Mooring Capacity (DWT)	Depth	Max, Arrowable Draft	Max, Arrowable L.O.A	Min, Arrowable L.O.A
NO. 3		50,000	13.0 m	11.8 m	230 m	100 m
NO. 4	1	10,000	9.4 m	8.6 m	160 m	90 m
	2	4,000	9.1 m	8.3 m	120 m	80 m
	3	4,000	7.1 m	6.5 m	160 m	80 m
NO. 5	1	2,000	6.0 m	5.4 m	80 m	60 m
	2	2,000	6.0 m	5.4 m	80 m	60 m
	3	5,425	7.0 m	6.3 m	104 m	45 m
	4	7,500	7.5 m	6.7 m	128 m	60 m
	5	15,000	9.2 m	8.2 m	150 m	71 m
NO. 6		70,000	14.8 m	13.3 m	280 m	105 m
NO. 7		130,000	15.0 m	13.5 m	280 m	135 m
NO. 8		169,500	185 m	16.5 m	280 m	150 m
SK gas	1	8,500	8.5 m	7.0 m	118 m	61 m
	2	5,000	7.5 m	6.0 m	110 m	61 m

G. Mooring Plans

◎ Berth No.1

SK No. 1-1 Berth

Maximun Mooring Capacity	7,500 M/T
Depth	7,5 m
Maximun Alloeable Draft	6,5 m
Maximun Alloeable L.O.A	110 m

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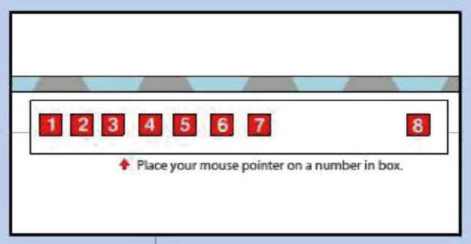

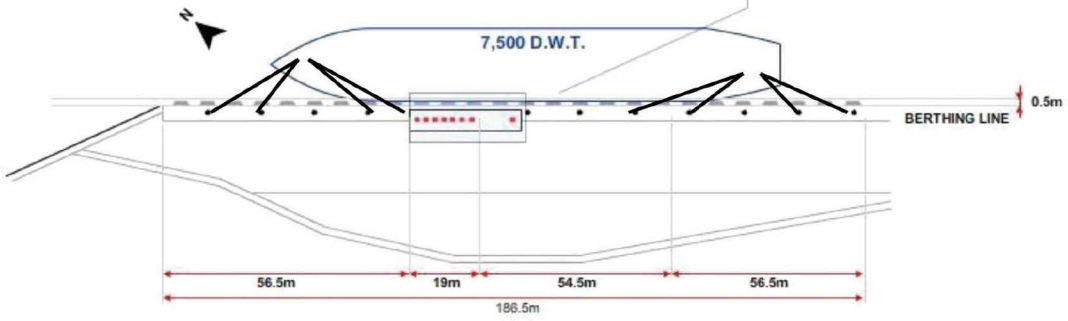

SK No. 1-2 Berth

Maximun Mooring Capacity	7,500 M/T
Depth	7,5 m
Maximun Alloeable Draft	6,5 m
Maximun Alloeable L.O.A	110 m

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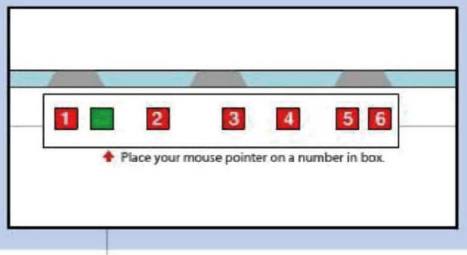

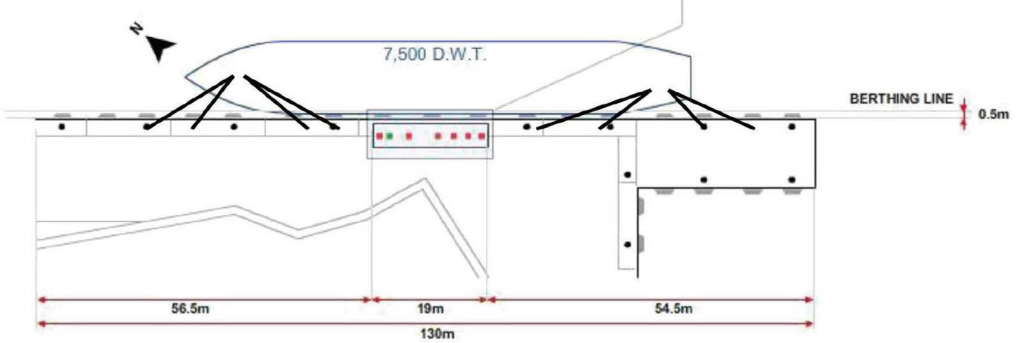

◎ Berth No.2

SK No.2-1 Berth

Maximun Mooring Capacity	3,000 M/T
Depth	5,5 m
Maximun Alloeable Draft	3,6 m
Maximun Alloeable L.O.A	55 m

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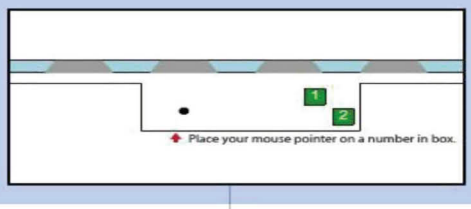

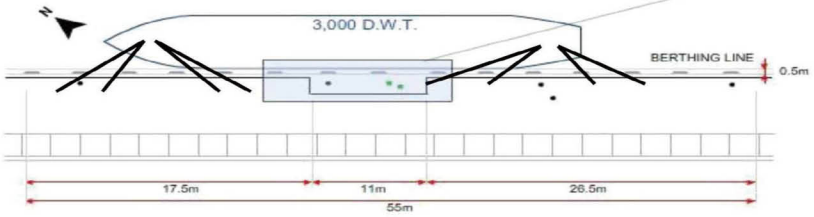

SK No.2-2 Berth

Maximun Mooring Capacity	5,000 M/T
Depth	7,5 m
Maximun Alloeable Draft	6,7 m
Maximun Alloeable L.O.A	110 m

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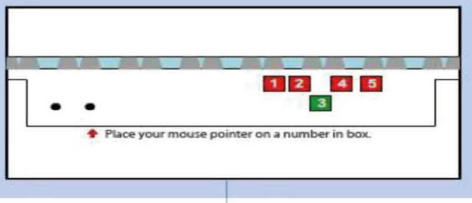

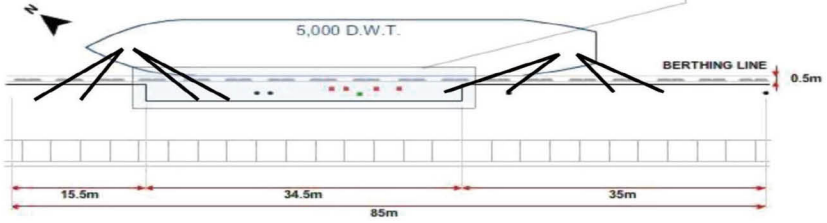

SK No.2-4 Berth

Maximun Mooring Capacity	5,000 M/T
Depth	7,5 m
Maximun Alloeable Draft	7,0 m
Maximun Alloeable L.O.A	110 m

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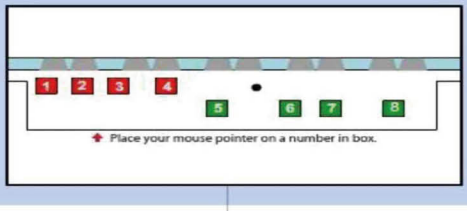

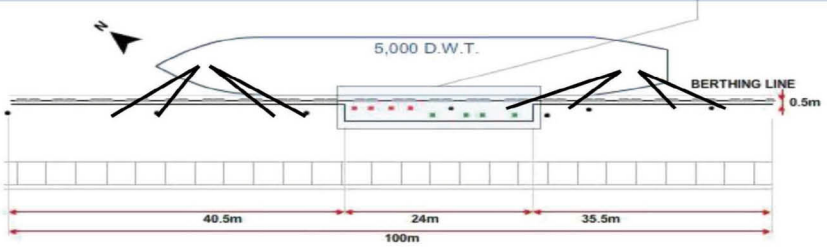

SK No. 2-5 Berth

Maximun Mooring Capacity	3,000 M/T
Depth	8,0 m
Maximun Alloeable Draft	7,0 m
Maximun Alloeable L.O.A	55 m

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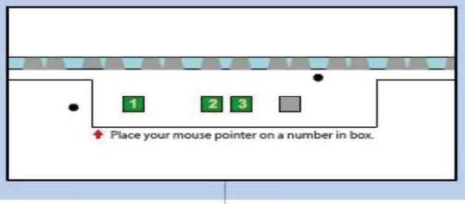

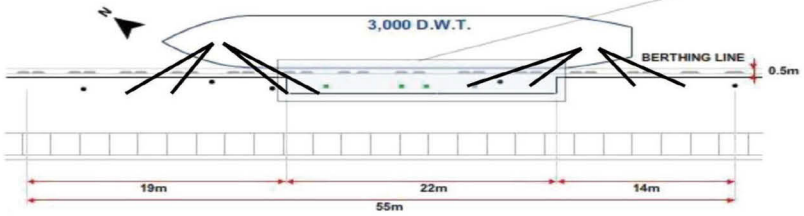

SK No. 2-6 Berth

Maximun Mooring Capacity	4,000 M/T
Depth	8,0 m
Maximun Alloeable Draft	7,0 m
Maximun Alloeable L.O.A	110 m

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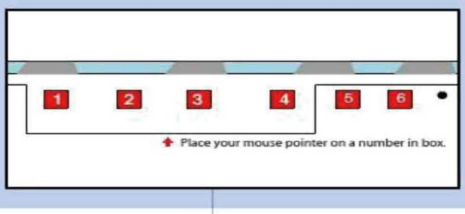

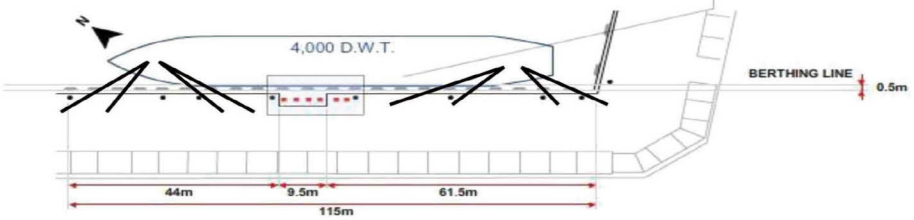

SK No. 2-7 Berth

Maximun Mooring Capacity	9,000 M/T
Depth	8,0 m
Maximun Alloeable Draft	7,0 m
Maximun Alloeable L.O.A	115 m

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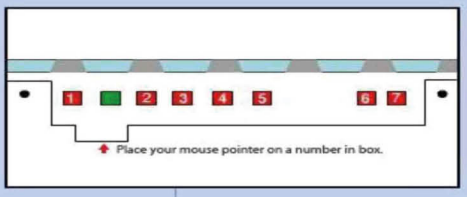

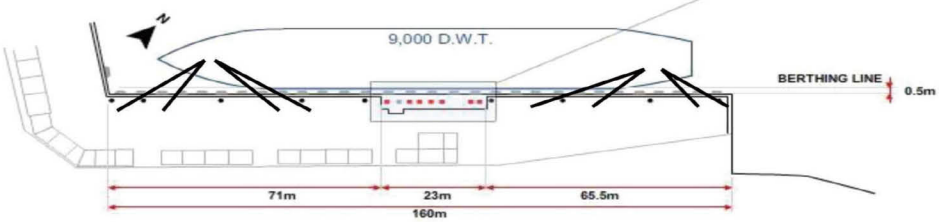

◎ Berth No.3

SK No.3 Berth

Maximun Mooring Capacity	Main:50,000 M/T Sub:20,000 M/T
Depth	13.0 m
Maximun Alloeable Draft	11.8 m
Maximun Alloeable L.O.A	230 m
Minimun Alloeable L.O.A	100 m

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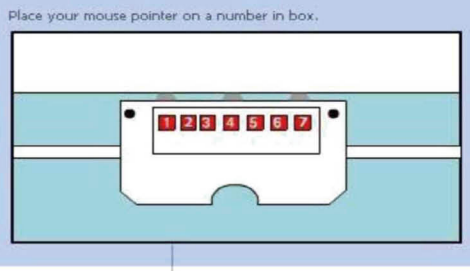
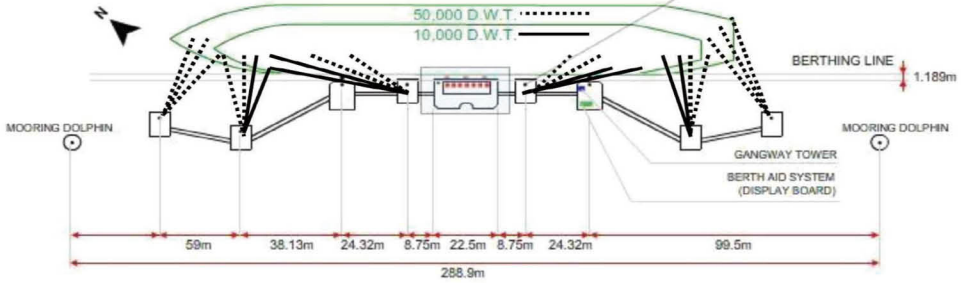
Place your mouse pointer on a number in box.





◎ Berth No.4

SK No.4-1 Berth

Maximun Mooring Capacity	10,000 M/T
Depth	9.4 m
Maximun Alloeable Draft	8.6 m
Maximun Alloeable L.O.A	160 m
Minimun Alloeable L.O.A	90 m

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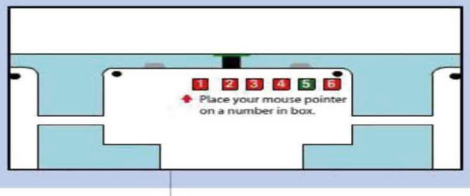

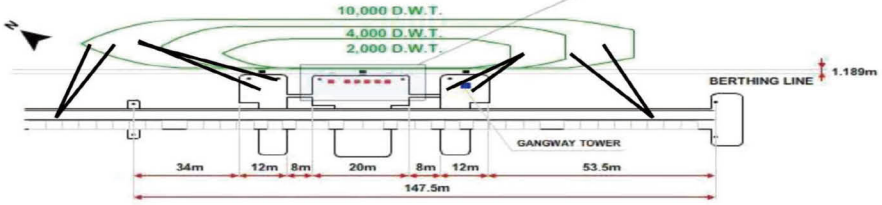

SK No.4-2 Berth

Maximun Mooring Capacity	40,000 M/T
Depth	9.1 m
Maximun Alloeable Draft	8.3 m
Maximun Alloeable L.O.A	120 m
Minimun Alloeable L.O.A	80 m

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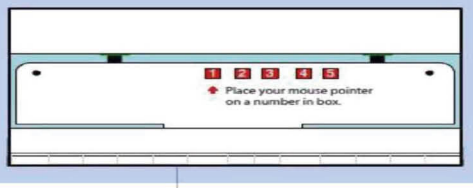

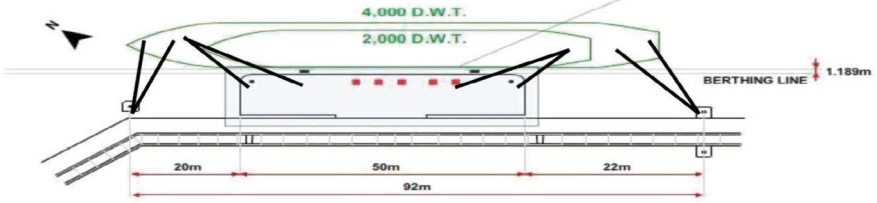

SK No.4-3 Berth

Maximun Mooring Capacity	40,000 M/T
Depth	7.1 m
Maximun Alloeable Draft	6.5 m
Maximun Alloeable L.O.A	160 m
Minimun Alloeable L.O.A	80 m

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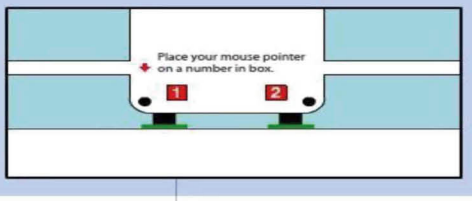

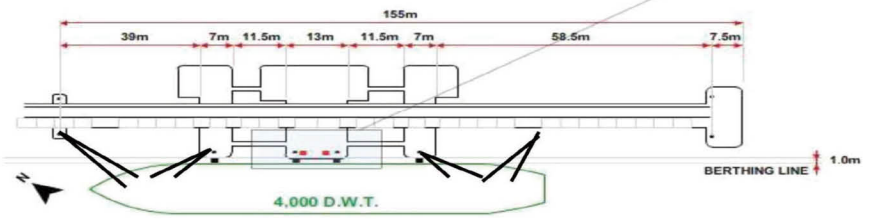

◎ Berth No.5

SK No. 5-1 Berth

Maximun Mooring Capacity	2,000 M/T
Depth	6.0 m
Maximun Alloeable Draft	5.4 m
Maximun Alloeable L.O.A	80 m
Minimun Alloeable L.O.A	60 m

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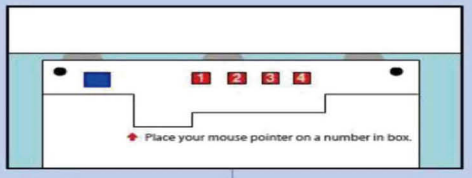

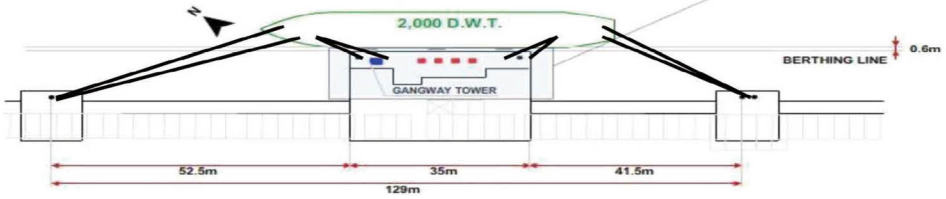

SK No. 5-2 Berth

Maximun Mooring Capacity	2,000 M/T
Depth	6.0 m
Maximun Alloeable Draft	5.4 m
Maximun Alloeable L.O.A	80 m
Minimun Alloeable L.O.A	60 m

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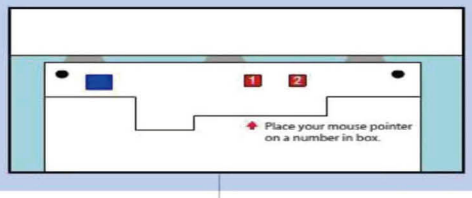

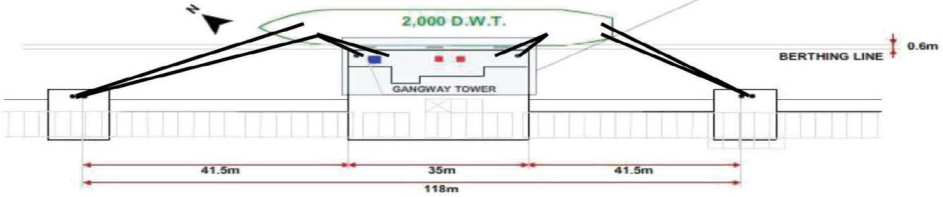

SK No. 5-3 Berth

Maximun Mooring Capacity	5,425 M/T
Depth	7.0 m
Maximun Alloeable Draft	6.3 m
Maximun Alloeable L.O.A	104 m
Minimun Alloeable L.O.A	45 m

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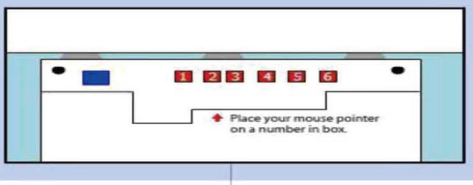

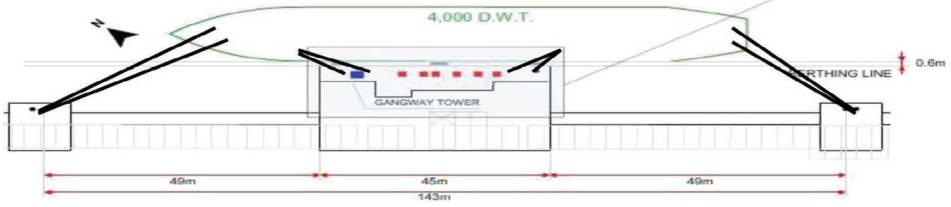

SK No. 5-4 Berth

Maximun Mooring Capacity	7,500 M/T
Depth	7.5 m
Maximun Alloeable Draft	6.7 m
Maximun Alloeable L.O.A	128 m
Minimun Alloeable L.O.A	60 m

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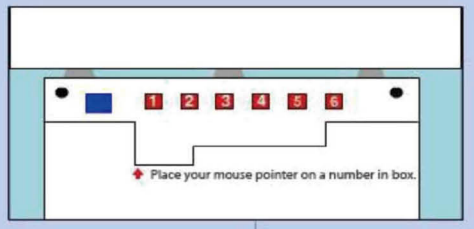

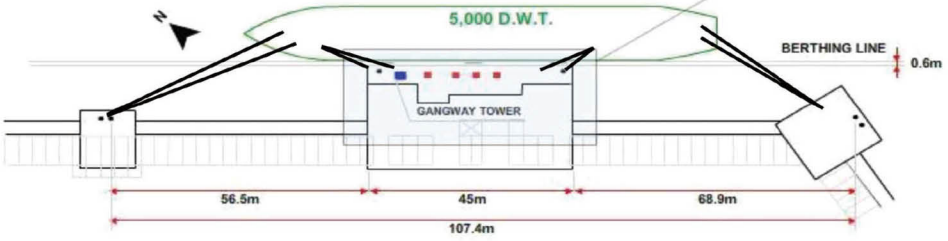

SK No. 5-5 Berth

Maximun Mooring Capacity	15,000 M/T
Depth	9.2 m
Maximun Alloeable Draft	8.2 m
Maximun Alloeable L.O.A	150 m
Minimun Alloeable L.O.A	71 m

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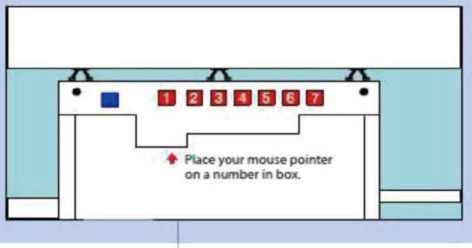

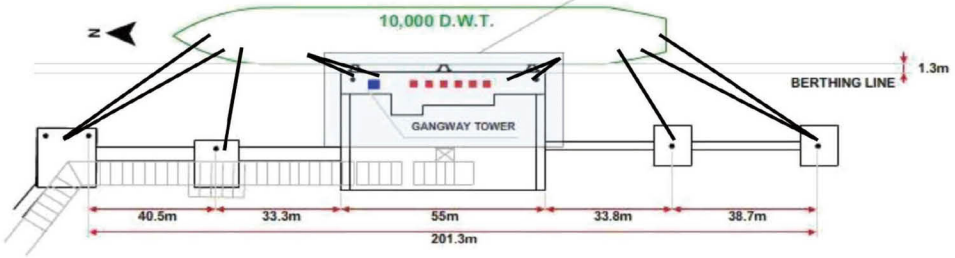

◎ Berth No.6

SK No.6 Berth

Maximun Mooring Capacity	70,000 M/T
Depth	14.8 m
Maximun Alloeable Draft	13.3 m
Maximun Alloeable L.O.A	280 m
Minimun Alloeable L.O.A	105 m
Minimun P.B.L	42 m

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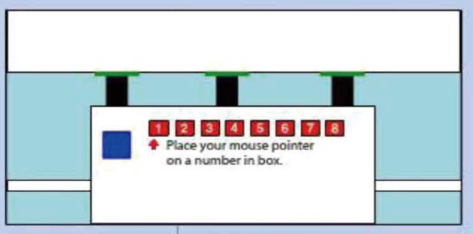

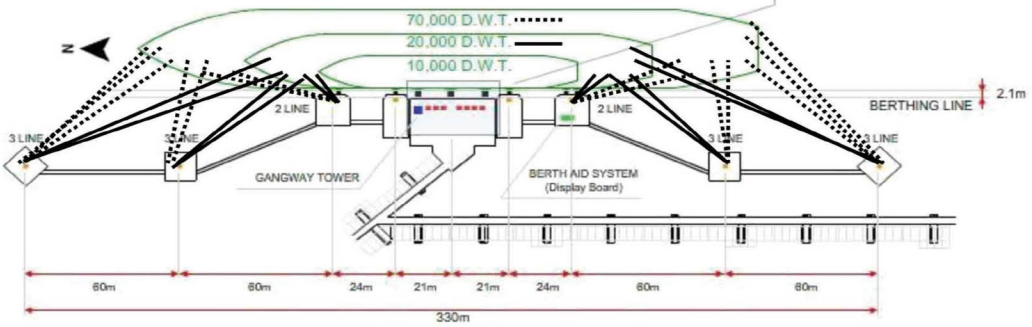

◎ Berth No.7

SK No.7 Berth

Maximun Mooring Capacity	130,000 M/T
Depth	15.0 m
Maximun Alloeable Draft	13.5 m
Maximun Alloeable L.O.A	280 m
Minimun Alloeable L.O.A	135 m

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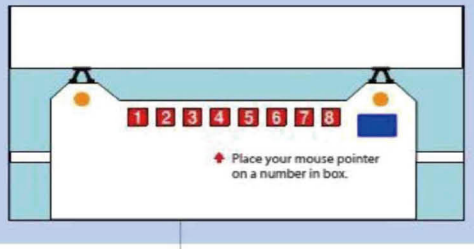

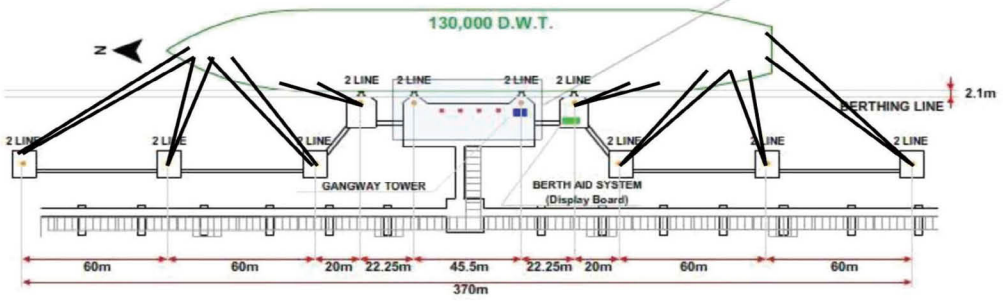

◎ Berth No.8

SK No.8 Berth

Maximun Mooring Capacity	169,500 M/T
Depth	18.5 m
Maximun Alloeable Draft	16.5 m
Maximun Alloeable L.O.A	280 m
Minimun Alloeable L.O.A	150 m

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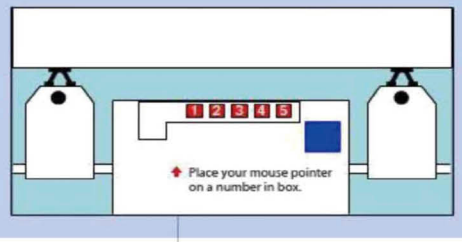
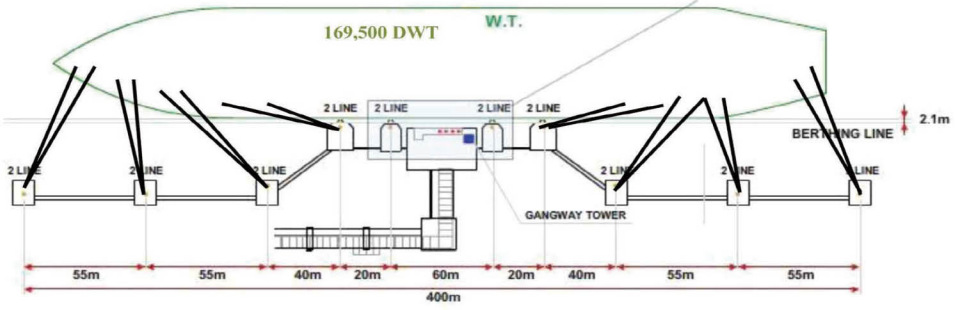
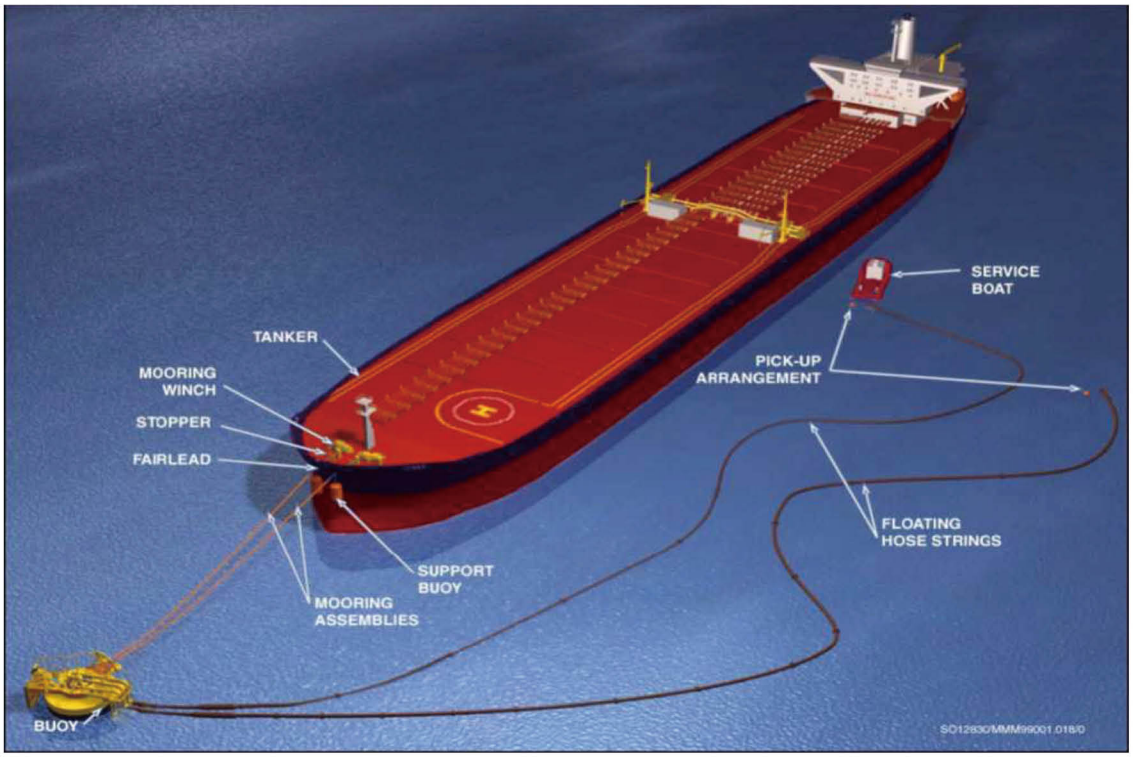




◎ SBM No.2, 3



H. Pre-Arrival Exchange Information

General Information	
1	Name and call sign of ship.
2	Country of registration.
3	Overall length and beam of ship and draught on arrival.
4	Estimated time of arrival at pilot station
5	Ship's displacement on arrival, If loaded, type of cargo and disposition.
6	Maximum draught expected during and upon completion of cargo handling.
7	Present ship security level (ISPS)
8	Last SIRE inspection(BP,SHELL,CHEVRON,EXXONMBIL,TOTAL) date & Approval status : Last CDI inspection port & date :
9	Last PSC inspection port & date : Detention item :

To . Port Master of SK Energy

From . Master of _____

Date .

Pre-Arrival Check Items	Good?(√)		
	Yes	No	N/A
Ⅰ. ANTI OIL POLLUTION			
1. All pumps and lines in fire & general service, IGS scrubber/deck water seal,ODME etc to be cleaned & flushed.			
2. All bilge/ballast/ODME/OWS(Oily Water Separator) overboard valves in engine room, main pump room, aux. pump room, steering gear room to be closed and lashed.			
3. Stripper overboard lines to be blinded.			
4. Any oil stains on deck especially on winch beds to be cleaned.			
5. Cargo lines to be tested to 110% or higher working pressure of the system included pipe lines outside gate valve.			
6. Stern tube sealing not to be leaked.			
7. Rudder post stuffing box not to be leaked.			
8. All scuppers to be plugged completely.			
9. All ballast tanks & void space nearby cargo/fuel tanks not to be polluted with cargo, fuel or oil stains. Master shall inspect all ballast tank & void space prior to arrival and if you find any pollution, report immediately to SK Terminal.			
Ⅱ. ANTI AIR POLLUTION			
1. Any black smoke in main/aux engine not to be taken.			
2. Ullage hole and hatch cover to be tightened.			
3. All P/V and Master riser Valve are fully secured and have no leakage on deck			
4. IG line gas tightness to be in good condition.			
Ⅲ. CARGO PUMPS			
1. Mechanical seals, flanges and pipes not to be leaked.			
2. Cargo/ballast/stripping pumps and their associated instrumentation / controls to be in good condition (All Gauges and Revolution meter) (Date of any pump trouble in last 3 voyage if have :)			
3. Emergency stop, high temperature and over speed trip function to be fitted and in good condition.			
Ⅳ. PUMP ROOM			
1. Any water in pumps, strippers, strainers and pertinent lines to be drained out.			
2. Any oil bilge, oil stain & oily waste to be cleaned			
3. Any flammable gas not to be detected.			
4. Bilge high level alarm function to be fitted and in good condition.			
5. Fixed ventilation to be operated in good condition (Interlock system working condition if available)			
Ⅴ. IGS			
1. IGS or IGG to be in good condition.			
2. Alarms and interlocks to be in good condition.			
3. All gauges (main line press, scrubber water flow, deck seal water flow, IG temperature, fan outlet press, O2 analyzer) to be in good condition.			
4. P/V breaker water level & portable O2 meter to be checked.			
5. Demister (Wet Filter) to be cleaned. (Demister cleaning date :)			
Ⅵ. VALVE			
1. Lashing ropes to be prepared for cargo, sea and COW related manual valves.			
2. All cargo, sea and COW valves to be tightened.			
3. Check valve to be fitted to each pump.			
4. Safety valves including pressure relief valves to be fitted & set to each pump.			

Pre-Arrival Check Items	Good?(√)		
	Yes	No	N/A
Ⅶ. CARGO MONITORING SYSTEM			
1. Cargo, ballast and FO tanks level gauges to be in good condition.			
2. High and high-high alarm devices to be in good condition.			
3. Remote monitoring system to be in good condition			
4. Cargo tanks pressure alarm were correctly setting (Setting pressure :)			
Ⅷ. HYDRAULIC UNIT			
1. Any oil leaks from unit and pipelines not to be found.			
2. All hydraulic valves to be in good condition.			
3. Hydraulic pipes(including branch lines, flanges and valves) to be maintained good condition			
4. Hydraulic pipes(including branch lines, flanges and valves) regularly to be tested (Last hydraulic pressure test date/Tested pressure :)			
Ⅸ. MACHINERY AND EQUIPMENT			
1. Fire fighting equipment to be in good condition.			
2. Any defect of machinery or equipment not to be found.			
3. Ballast Water Treatment System to be operated in good order.			
Ⅹ. MOORING LINE AND WINCH			
1. Winch brake holding condition to be in good working.			
2. Any hydraulic oil from mooring equipment not to be leaked.			
3. Mooring lines to be in good condition.			
4. Reeling on winch drum to be set in right direction.			
5. All mooring ropes or wires to be same size and material.			
6. If fiber tails on mooring wires to be fitted, breaking strength of tail rope and shackle have to be at least 25% greater than that of the wire line to which it is attached.			
XI. CARGO AND BALLAST TANK			
1. Remarkable changes of ullages in cargo tanks not to be found.			
2. Water content in cargo to be checked.			
3. Ballast tanks not to be polluted with any cargo, fuel or oil stains.			
4. Any hull, bulkhead, valve or pipeline not to be leaked.			
5. Maintain cargo tank pressure less than 400 mmwg for Gasoline/ Naphtha Loading and Discharging vessel prior to POB			
XIII. Vapor Recovery Unit			
1. Vapor Line to be cleaned for Gasoline/Naphtha Loading			
2. Vapor manifold to be prepared for Gasoline/Naphtha Loading. #2-2, 2-4 & 2-6: 8 inch, #5-5: 8 Inch, #6~8: 12 Inch(ANSI) reducer			
3. VECS(Vapour Emission Control System) to be operated in good order			
XIII. Exhaust Gas Cleaning System			
1. Exhaust Gas Cleaning System condition to be in good working.			
2. Exhaust Gas(Sox) and Washwater(pH, PAH, Turbidity, Nitrates) IMO Standard to be satisfied			
XIV. MISCELLANEOUS ITEMS			
1. Terminal Information & Rules, Safety Clause & other safety information for SK Energy to be known thoroughly.			
2. If a deficiency was pointed out in last calling, it must be rectified before entering into SK Energy Terminal according to vessel/owner remedial action plan.			
3. If Vessel have any trouble for Navigation, Cargo and Mooring Operation in last 3 Voyage before entering into SK Energy Terminal, Master shall inform them to terminal in detail .			
4. Captain/Chief Officer's changeover regulation for domestic vessel to be applied.			

Company Stamp	Date	Signature

I. Safety Letter to Master

Safety Letter to Master

The Master SS/MV _____ Company _____

Port _____ Berth _____

Date _____

Dear sir.

Responsibility for tha safe conduct of operations while your ship is at this Terminal rests jointly with you, as Master of the ship, and with the responsible terminal Representative. We wish, therefore, before operations start, to seek your full co-operation and understanding on the safety requirements set out in the Ship/Shore Safety Check-List, which are based on the safety, practices that are widely accepted by the oil and tanker industries.

We expect you, and all under your command, to adhere strictly to these requirements throughout your ship's stay alongside this terminal and we, for our part, will ensure that our personnel do likewise, and co-operate fully with you in the mutual interest of safe and efficient operations.

Before the start of operations, and from time to time there after, for our mutual safety, a member of the terminal staff, where appropriate together with a Responsible Officer, will make a routine inspection of your ship to ensure that elements addressed within the scope of the Ship/Shore Safety Check-List are being managed in an acceptable manner. Where corrective action is needed,we will not agree to operations commencing or, should they have been started, we will require them to be stopped.

Similarly, if you cinsider that safety is being endangered by any action on the part of our staff or by any equipment under our control, you should demand immediate cessation of operations.

There can be no compromise with safety.

Please acknowledge receipt of this letter by countersigning and returning the attached copy.

Terminal Representative

Signed _____

terminal Representative on duty is _____

Position or Title _____

Contact Details _____

Master

Signed _____

SS/MV _____

Date/Time _____

J. Emergency Procedure Notice

ACTION–SHIP	ACTION–BERTH
Emergency on your ship	**Emergency on a ship**
a. Raise the alarm	a. Raise the alarm
b. Cease all cargo/ballast operations and close all valves if discharging. If loading only close valve after terminal advise it is safe to do so, after stopping their pumps	b. Contact ship
c. Inform Terminal Representative	c. Cease all cargo operations and close all valves
d. Emergency Response & Action	d. Stand by to disconnect hoses or loading arms
e. Stand by to disconnect hoses	e. Emergency Response & Action
f. Bring engines to standby	f. Inform all ships in the vicinity
	g. Implement Terminal emergency plan
	h. Inform port authority (VHF Ch. 14/16, Tel.+82–119)
Emergency on another ship	**Emergency ashore**
* Stand by, and when instructed :	a. Raise alarm
a. Cease all cargo/ballast operations and close all valves	b. Cease all cargo operations and close all valves
b. Disconnect hoses	c. Emergency Response & Action
c. Bring engines and crew to standby, ready to unberth	d. If required, stand by to disconnect hoses
	e. Implement Terminal emergency plan
	h. Inform port authority (VHF Ch. 14/16, Tel.+82–119)

IN CASE OF FIRE, DO NOT HESITATE TO RAISE THE ALARM

TERMINAL FIRE ALARM:

At this terminal, the fire alarm signal is _____

IN CASE OF FIRE :

1. Sound one or more blasts on the ship's whistle, each blast of not less than ten seconds duration supplemented by a continuous sounding of the general alarm system.
2. Contact the terminal.

Telephone _____ UHF/VHF channel _____

IN CASE OF FIRE, TERMINAL PERSONNEL WILL DIRECT THE MOVEMENT OF VEHICULAR TRAFFIC

K. Approved Smoking Room Notice

SK energy

APPROVED SMOKING ROOM

LOCATION : _____ **DATE :** _____

L. Radio Receipt

Radio Receipt (무전기 인수인계서)

Date (날짜): _____ Vessel Name (선박명): _____

Radio is supplied for communication with the terminal during cargo movement and is to be returned to the terminal and signed off for receipt by the terminal operator and the vessel.
무전기는 화물 이송 중 터미널과 통신하기 위해 제공됩니다. 무전기는 터미널로 반납해야 하며, 터미널 책임자와 선박은 인수인계서에 서명해야합니다.

Radio :		Valued at : $ ____ USD	
Make :	Model:	Signed Out	Signed In
Radio Serial :		☐	☐
Battery Serial No :		☐	☐
Battery Serial No :		☐	☐

Receivedon Vessel :

Vessel Signature : _____ Terminal Signature : _____

Date : _____ Time : _____

In case of damage or loss, the vessel must compensate for it.
훼손, 분실할 경우 선박측에서 무전기를 변상해야 합니다.

M. Declaration of Security

Declaration of Security (보안 합의서)

Name of Ship (선명) :	
Port of Registry (선적항) :	
IMO Number (IMO번호) :	
Name of Port Facility(항만시설명) :	

This Declaration of Security valid form ..... until ..... for the following activities .....(refer to below)..... (동 보안선언서는 아래의 보안등급하에서 ..... 부터 ..... 까지 다음의 활동 .....(아래참조).....에 대하여 유효합니다.

Security levels(보안등급)

Ship Security Level (선박보안등급) :	
Port Facility Security Level (항만시설보안등급) :	

The Port facility and ship agree to the following security measures and responsibilities to ensure compliance with the requirements of Part A of the International Code for Security of Ships and Port facilities. (항만시설 및 선박은 국제 선박 및 항만시설 보안 코드 A편의 요건에 적합함을 보장하기 위하여 다음과 같은 보안조치 및 책임에 대하여 상호 동의합니다.)

	The affixing of the initials of the SSO or PFSO under these columns indicates that the activity will be done, in accordance with relevant approved plan, by (아래열에 표시된 선박보안책임자 또는 항만시설보안책임자의 머리글자는 해당 활동이 관련된 승인계획에 따라 각 주체에 의해서 수행될 것을 나타냅니다.)	
Activity (활동)	**The Port Facility (항만시설)**	**The Ship(선박)**
Ensuring the performance of all security duties (모든 보안임무의 수행보장)		
Monitoring restricted areas to ensure that only authorized personnel have access (제한구역에 인가된 자만이 접근함을 보장하기 위한 감시)		
Controlling access to the portfacility (항만시설에 대한 접근통제)		
Controlling access to the ship (선박에 대한 접근통제)		
Monitoring of the port facility, including berthing areas and areas surrounding the ship (접안지역, 선박주변지역을 포함한 항만시설 감시)		
Monitoring of the ship, including berthing areas and areas surrounding the ship (접안지역, 선박주변지역을 포함한 선박 감시)		
Handling of cargo (화물의 취급)		
Delivery of ship's stores (선용품의 인도)		
Handling unaccompanied baggage (미휴대수하물 취급)		
Controlling the embarkation of persons and their effects (인원의 승선 및 소지품 통제)		
Ensuring that security communication is readily available between the ship and port facility (선박과 항만시설간 보안통신의 손쉬운 이용가능성을 보장)		

※ If more detailed security activities is required, a supplement could be attached.
(세부적인 보안조치 사항이 필요한 경우 별지로 작성하여 붙임)

The signatories to this agreement certify that security measures and arrangements for the both the port facility and the ship during the specified activities meet the provisions of chapter XI – 2 and and Part A of Code that will be implemented in accordance with the provisions already stipulated in their approved plan or the specific arrangements agreed to and set out in the attached annex. (본 합의문의 체약국들은 선박 및 항만에 대한 보안조치 및 계획이 특정활동 동안 각자의 승인 계획 또는 동의한 특정 합의사항에 이미 명기되어 유첨된 부속서에 마련된 규정에 따라서 시행되는 협약 제11-2장 및 코우드 A편의 규정에 만족함을 증명합니다.)

Dated (일자) ..... on the (장소) .....

Signed for and on behalf of (아래를 대행하여 서명)	
The port facility (항만시설) :	The ship (선박) :

Name and title of person who signed (서명자의 직위 및 성명)	
Name (성명) :	Name (성명) :
Title (직책) :	Title (직책) :

Contact Details (연락 세부사항) (전화번호 또는 사용중인 무선채널 또는 주파수를 나타낼 것)	
For the port facility (항만시설)	For the ship (선박)
Port Facility (항만시설) : Port Facility Security Officer (항만시설보안책임자) :	Master (선장) : Ship Security Officer (선박보안사관) : Company (회사) : Company Security Officer (회사보안책임자) :

□ Attachment (붙임) : More detailed security activities, if any. (선박과 항만시설 간에 추가적으로 시행하여야 하는 세부 보안조치사항, 있는 경우)

N. Ship/Shore of Safety Check-List

The Ship/Shore Safety Check-List (선박/육상 안전점검표)

Ship's Name (선명) :	
Berth (부두명) :	Port (항구명) :
Date of Arrival (도착일자) :	Time of Arrival (도착시간) :

Part 1A 선박 Tanker

입항 전 점검 사항
Checks pre-arrival

항목 Item	점검 Check	상태 Status	비고 Remark
1	입항 전 정보 교환을 하였다. (6.5, 21.2) Pre-arrival information is exchanged.	☐ Yes	
2	국제 육상 시설 연결구가 사용 가능하다. (5.5, 19.4.3.1) International shore fire connection is available.	☐ Yes	
3	화물 이송 호스가 사용하기 적합하다. (18.2) Transfer hoses are of suitable construction.	☐ Yes	
4	터미널 정보 책자를 검토하였다. (15.2.2) Terminal information booklet reviewed.	☐ Yes	
5	접안 전 정보 교환을 하였다. (21.3, 22.3) Pre-berthing information is exchanged.	☐ Yes	
6	P/V 밸브가 정상 작동한다. (11.1.8) Pressure/vacuum valves and/or high velocity vents are operational.	☐ Yes	
7	고정식 및 이동식 산소 검지기가 정상 작동한다. (2.4) Fixed and portable oxygen analysers are operational.	☐ Yes	

Part 1B 선박 Tanker

입항 전 점검 사항 불활성 가스 시스템을 사용할 경우
Checks pre-arrival if using an inert gas system

항목 Item	점검 Check	상태 Status	비고 Remark
8	불활성 가스 장비 압력 및 산소 농도 기록계는 작동한다. (11.1.5.2, 11.1.11) Inert gas system pressure and oxygen recorders are operational.	☐ Yes	
9	불활성 가스 시스템 및 관련 장비들은 작동한다. (11.1.5.2, 11.1.11) Inert gas system and associated equipment are operational.	☐ Yes	
10	화물창 산소 농도는 8% 이하이다. (11.1.3) Cargo tank atmospheres' oxygen content is less than 8%.	☐ Yes	
11	화물창은 양압을 유지하고 있다. (11.1.3) Cargo tank atmospheres are at positive pressure.	☐ Yes	

Part 2 터미널 Terminal

입항 전 점검 사항
Checks pre-arrival

항목 Item	점검 Check	상태 Status	비고 Remark
12	입항 전 정보 교환을 하였다. (6.5, 21.2) Pre-arrival information is exchanged.	☐ Yes	
13	국제 육상 시설 연결구가 사용 가능하다. (5.5, 19.4.3.1, 19.4.3.5) International shore fire connection is available.	☐ Yes	
14	화물 이송 설비가 사용하기 적합하다. (18.1, 18.2) Transfer equipment is of suitable construction.	☐ Yes	
15	터미널 정보 책자를 선박에 제공하였다. (15.2.2) Terminal information booklet transmitted to tanker.	☐ Yes	
16	접안 전 정보 교환을 하였다. (21.3, 22.3) Pre-berthing information is exchanged.	☐ Yes	

Part 3 선박 Tanker

접안 후 점검 사항
Checks after mooring

항목 Item	점검 Check	상태 Status	비고 Remark
17	방 현재는 적절하다. (22.4.1) Fendering is effective.	☐ Yes	
18	계류 배치가 유효하다. (22.2, 22.4.3) Mooring arrangement is effective.	☐ Yes	
19	선박 출입 설비는 안전하다. (16.4) Access to and from the tanker is safe.	☐ Yes	
20	배수구와 기름받이는 막혀 있다. (23.7.4, 23.7.5)S cuppers and savealls are plugged.	☐ Yes	
21	하역 설비의 해수 연결구와 선 외 배출구는 고정되었다. (23.7.3) Cargo system sea connections and overboard discharges are secured.	☐ Yes	
22	VHF / UHF를 사용하는 송신기는 저 출력 모드로 설정하였다 (4.11.6, 4.13.2.2) Very high frequency and Ultra high frequency transceivers are set to low power mode.	☐ Yes	
23	거주 구역 외부 출입구는 통제되고 있다. (23.1) External openings in superstructures are controlled.	☐ Yes	
24	펌프실 환기는 적절하다. (10.12.2) Pumproom ventilation is effective.	☐ Yes	
25	MF/HF 안테나는 분리되어 있다. (4.11.4, 4.13.2.1) Medium frequency/high frequency radio antennae are isolated.	☐ Yes	
26	거주 구역 내부는 양압을 유지한다. (23.2) Accommodation spaces are at positive pressure.	☐ Yes	
27	화재 제어도(Fire Control Plan)는 사용 가능하다. (9.11.2.5) Fire control plans are readily available.	☐ Yes	

Part 4 터미널 Terminal

접안 후 점검 사항
Checks after mooring

항목 Item	점검 Check	상태 Status	비고 Remark
28	방현재는 적절하다. (22.4.1) Fendering is effective.	☐ Yes	
29	선박은 터미널 계류 계획에 따라 계류되었다. (22.2, 22.4.3) Tanker is moored according to the terminal mooring plan.	☐ Yes	
30	터미널 출입 설비는 안전하다. (16.4) Access to and from the terminal is safe.	☐ Yes	
31	기름받이와 섬프는 고정되었다. (18.4.2, 18.4.3, 23.7.4, 23.7.5) Spill containment and sumps are secure.	☐ Yes	

Part 5A 선박 및 터미널 Tanker and Terminal

사전 이송 회의
Pre-transfer conference

항목 Item	점검 Check	선박 Tanker	터미널 Terminal
32	선박은 합의된 통지 기간 내에 이동할 준비가 되어 있다. (9.11, 21.7.1.1, 22.5.4) Tanker is ready to move at agreed notice period.	☐ Yes	☐ Yes
33	선박 및 육상 간 효과적인 통신 수단이 수립되어 있다. (21.1.1, 21.1.2) Effective tanker and terminal communications are established.	☐ Yes	☐ Yes
34	화물 이송 설비는 안전한 상태이다. (분리, 드레인, 감압) (18.4.1) Transfer equipment is in safe condition (isolated, drained and de-pressurised).	☐ Yes	☐ Yes
35	작업 감독과 당직은 적절하다. (7.9, 23.11) Operation supervision and watchkeeping is adequate.	☐ Yes	☐ Yes
36	비상시 조치를 위한 충분한 인원이 있다. (9.11.2.2, 23.11) There are sufficient personnel to deal with an emergency.	☐ Yes	☐ Yes
37	흡연 제한 및 지정된 흡연 구역은 설정되었다. (4.10, 23.10) Smoking restrictions and designated smoking areas are established.	☐ Yes	☐ Yes
38	나화(裸火)금지는 수립되었다. (4.10.1) Naked light restrictions are established.	☐ Yes	☐ Yes
39	전기 기기 및 전자 기기 사용 통제에 관하여 합의하였다. (4.11, 4.12) Control of electrical and electronic devices is agreed.	☐ Yes	☐ Yes
40	선박 및 터미널에서 비상시 탈출할 수단은 각각 수립되었다. (20.5) Means of emergency escape from both tanker and terminal are established.	☐ Yes	☐ Yes
41	소화 설비는 사용할 수 있다. (5, 19.4, 23.8) Firefighting equipment is ready for use.	☐ Yes	☐ Yes
42	유출 방재 자재는 사용할 수 있다. (20.4) Oil spill clean-up material is available.	☐ Yes	☐ Yes

Part 5B	선박 및 터미널 Tanker and Terminal	산적 액체 화학 제품. 사전 이송 회의 점검 사항 Bulk liquid chemical. Check pre-transfer conference

항목 Item	점검 Check	선박 Tanker	터미널 Terminal
61	(필요하다면) 반응 억제제 증서를 화물 제조업체로부터 받았다. Inhibition certificate received (if required) from manufacturer.	☐ Yes	☐ Yes
62	적절한 개인 보호구를 식별하였고 사용 가능하다. (4.8.1) Appropriate personal protective equipment identified and available.	☐ Yes	☐ Yes
63	화물에 접촉될 수 있는 인원에 대한 대책을 합의하였다. (1.4) Countermeasures against personal contact with cargo are agreed.	☐ Yes	☐ Yes
64	화물 이송 속도 및 자동 정지 시스템과 밸브 폐쇄 시간 간의 연관성을 합의하였다. (16.8, 21.4, 21.5, 21.6) Cargo handling rate and relationship with valve closure times and automatic shutdown systems is agreed.	☐ Yes	☐ Yes
65	화물 시스템 게이지 작동과 경보 설정치는 확인되었다. (12.1.6.6.1) Cargo system gauge operation and alarm set points are confirmed.	☐ Yes	☐ Yes
66	적절한 휴대용 가스 검지기를 사용한다. (2.4) Adequate portable vapour detection instruments are in use.	☐ Yes	☐ Yes
67	소화수단 및 절차에 관한 정보를 상호 교환하였다. (5, 19) Information on firefighting media and procedures is exchanged.	☐ Yes	☐ Yes
68	화물 이송 호스는 취급하는 화물에 적합한지 확인하였다. (18.2) Transfer hoses confirmed suitable for the product being handled.	☐ Yes	☐ Yes
69	화물 작업이 영구적으로 설치된 배관 시스템에 의해서만 수행되는지 확인하였다. Confirm cargo handling is only by a permanent installed pipeline system.	☐ Yes	☐ Yes
70	이너팅 혹은 퍼징을 위한 질소를 터미널에서 받기 위한 절차가 수립되어 있다. (12.1.14.8) Procedures are in place to receive nitrogen from the terminal for inerting or purging.	☐ Yes	☐ Yes

Part 5C	선박 및 터미널 Tanker and Terminal	액화 가스. 사전 이송 점검 사항 Liquefied gas. Check pre-transfer

항목 Item	점검 Check	선박 Tanker	터미널 Terminal
71	화물 제조업체로부터 반응 억제제 증서를 수령 하였다. Inhibition certificate received (if required) from manufacturer.	☐ Yes	☐ Yes
72	물 분무 시스템이 작동 중이다. (5.3.1, 19.4.3) Water spray system is operational.	☐ Yes	☐ Yes
73	적절한 개인용 보호 장구를 확인 및 이용 가능하다. (4.8.1) Appropriate personal protective equipment identified and available.	☐ Yes	☐ Yes
74	원격 제어 밸브가 작동 중이다. Remote control valves are operational.	☐ Yes	☐ Yes
75	화물 펌프 및 컴프레셔가 작동 중이다. Cargo pumps and compressors are operational.	☐ Yes	☐ Yes
76	선박 및 터미널 간에 최대 작업 압력을 합의하였다. (21.4, 21.5, 21.6) Maximum working pressures are agreed between tanker and terminal.	☐ Yes	☐ Yes
77	재액화 또는 보일 오프 제어 장비는 작동 중이다. Reliquefaction or boil-off control equipment is operational.	☐ Yes	☐ Yes
78	가스 검지 장비는 화물에 맞게 적절히 설정되었다. (2.4) Gas detection equipment is appropriately set for the cargo.	☐ Yes	☐ Yes
79	화물 시스템 게이지 작동 및 경보 설정치를 확인하였다. (12.1.6.6.1) Cargo system gauge operation and alarm set points are confirmed.	☐ Yes	☐ Yes
80	비상 정지 시스템을 테스트했고 작동 중이다. (18.5) Emergency shutdown systems are tested and operational.	☐ Yes	☐ Yes
81	화물 이송 속도 및 자동 정지 시스템과 밸브 폐쇄 시간 간의 연관성을 합의하였다. (16.8, 21.4, 21.5, 21.6) Cargo handling rate and relationship with valve closure times and automatic shutdown systems is agreed.	☐ Yes	☐ Yes
82	이송 예정 화물의 최대/최소 온도/압력을 합의하였다. (21.4, 21.5, 21.6) Maximum/minimum temperatures/pressures of the cargo to be transferred are agreed.	☐ Yes	☐ Yes
83	화물창 감압 밸브 설정은 확인되었다. (12.11, 21.2, 21.4) Cargo tank relief valve settings are confirmed.	☐ Yes	☐ Yes

항목 Item	합의 Agreement	상세 Details	선박 Tanker	터미널 Terminal
32	선박 이동 준비 Tanker manoeuvring readiness	완전한 이동 준비를 위한 통지 기간(최대) : Notice period (maximum) for full readiness to manoeuvre : 불능 기간(만약 허가를 받을 경우) : Period of disablement (if permitted):	☐ Yes	☐ Yes
	32. 선박은 합의된 통지 기간 내에 이동할 준비가 되어 있다. (9.11, 21.7.1.1, 22.5.4)			
33	보안 협약 Security protocols	보안 등급 : Security level : 현지 요구사항 : Local requirements :	☐ Yes	☐ Yes
	33. 선박 및 육상 간 효과적인 통신 수단이 수립되어 있다. (21.1.1, 21.1.2)			
33	효과적인 선박/터미널 간 통신 수단 Effective tanker/terminal communications	주 통신 수단 : Primary system: 보조 통신 수단 : Backup system :	☐ Yes	☐ Yes
	33. 선박 및 육상 간 효과적인 통신 수단이 수립되어 있다. (21.1.1, 21.1.2)			
35	작업 감독과 당직 Operational supervision and watch keeping	선박 : Tanker : 터미널 : Terminal :	☐ Yes	☐ Yes
	35. 작업 감독과 당직은 적절하다. (7.9, 23.11)			
37 38	지정된 흡연 구역과 나화(裸火)) 금지 Dedicated smoking areas and naked lights restrictions	선박 : Tanker : 터미널 : Terminal :	☐ Yes	☐ Yes
	37. 흡연 제한 및 지정된 흡연 구역은 설정되었다. (4.10, 23.10) 38. 나화(裸火)금지는 수립되었다. (4.10.1)			
45	최대 풍속, 조류, 파도, 너울 기준 또는 다른 환경적인 요소 Maximum wind, current and sea/swell criteria or other environmental factors	화물 이송 중지 : Stop cargo transfer : 분리 : Disconnect : 이안 : Unberth :	☐ Yes	☐ Yes
	45. 하역, 연료유 및 평형수 작업 절차는 합의하였다. (21.4, 21.5, 21.6)			
45 46	화물, 연료유, 평형수 작업 제한 Limits for cargo, bunkers and ballast handling	최대 이송률 : Maximum transfer rates : 토핑 이송률 : Topping-off rates : 매니폴드 최대 압력 : Maximum manifold pressure : 화물 온도 : Cargo temperature : 기타 제한 사항 : Other limitations :	☐ Yes	☐ Yes
	45. 하역, 연료유 및 평형수 작업 절차는 합의하였다. (21.4, 21.5, 21.6) 46. 화물 이송 관리 통제는 합의하였다. (12.1)			

항목 Item	합의 Agreement	상세 Details	선박 Tanker	터미널 Terminal
45 46	압력 서지 제어 Pressure surge control	개방하는 최소 화물창 개수 : Minimum number of cargo tanks open : 탱크 전환 협의 : Tank switching protocols : 최대 선적률 : Full load rate : 토핑 이송률 : Topping-off rate : 자동 밸브 폐쇄 시간 : Closing time of automatic valves :	☐ Yes	☐ Yes
	45. 하역, 연료유 및 평형수 작업 절차는 합의하였다. (21.4, 21.5, 21.6) 46. 화물 이송 관리 통제는 합의하였다. (12.1)			
46	화물 이송 관리 절차 Cargo transfer management procedures	조치 통지 기간 : Action notice periods : 이송 중지 협의 : Transfer stop protocols :	☐ Yes	☐ Yes
	46. 화물 이송 관리 통제는 합의하였다. (12.1)			
50	화물 이송에 대해 주기적 점검 사항을 합의하였다. Routine for regular checks on cargo transferred are agreed	주기적인 화물 이송량 확인 : Routine transferred quantity checks :	☐ Yes	☐ Yes
	50. 화물 이송 관련 주기적 재점검 사항은 합의하였다. (23.7.2)			
51	비상 신호 Emergency signals	선박 : Tanker : 터미널 : Terminal :	☐ Yes	☐ Yes
	51. 비상 신호와 비상 정지 절차는 합의하였다. (12.1.6.3, 18.5, 21.1.2)			
55	탱크 통풍 시스템 Tank venting system	절차 : Procedure :	☐ Yes	☐ Yes
	55. 화물창 통풍 시스템과 밀폐 작업 절차는 합의하였다. (11.3.3.1, 21.4, 21.5, 23.3.3)			
	밀폐 작업 Closed operations	요구사항 Requirements :	☐ Yes	☐ Yes
	55. 화물창 통풍 시스템과 밀폐 작업 절차는 합의하였다. (11.3.3.1, 21.4, 21.5, 23.3.3)			
56	증기 회수 라인 Vapour return line	작업 조건 : Operational parameters : 최대 유량 : Maximum flow rate :	☐ Yes	☐ Yes
	56. 베이퍼 리턴 라인 작동 조건은 합의하였다. (11.5, 18.3, 23.7.7)			
60	터미널에서 공급하는 질소 Nitrogen supply from terminal	수급 절차 : Procedures to receive : 최대 압력 : Maximum pressure : 유량 : Flow rate :	☐ Yes	☐ Yes
	60. 터미널에서 화물창으로 질소를 수급하는 절차를 합의하였다. (12.1.14.8)			
83	가스선에만 적용 : 화물창 감압 밸브 설정 For gas tanker only : Cargo tank relief valve setting	Tank 1 : Tank 2 : Tank 3 : Tank 4 : Tank 5 : Tank 6 : Tank 7 : Tank 8 : Tank 9 : Tank 10 :	☐ Yes	☐ Yes
	83. 화물창 감압 밸브 설정은 확인되었다. (12.11, 21.2, 21.4)			
XX	예외 사항 및 추가 사항 Exceptions and additions	양측에서 인지하여야 할 특별한 사항 Special issues that both parties should be aware of :	☐ Yes	☐ Yes

Part 7A 터미널 Terminal

사전 이송 점검 사항
Checks pre-transfer

항목 Item	점검 Check	상태 Status	비고 Remark
84	이동식 기름받이는 정확한 위치에 있고 비어 있다. (23.7.5) Portable drip trays are correctly positioned and empty.	☐ Yes	
85	각 탱크의 불활성 가스(질소) 공급 밸브는 하역작업 계획에 따라 고정되어 있다. (12.1.13.4) Individual cargo tank inert gas supply valves are secured for cargo plan.	☐ Yes	
86	불활성 가스는 산소 농도가 5% 이하로 공급되고 있다. (11.1.3) Inert gas system delivering inert gas with oxygen content not more than 5%.	☐ Yes	
87	화물창 하이 레벨 경보는 작동한다. (12.1.6.6.1) Cargo tank high level alarms are operational.	☐ Yes	
87	모든 화물창, 평형수 탱크, 연료유 탱크는 닫혀 있다. (23.3) All cargo, ballast and bunker tanks openings are secured.	☐ Yes	

Part 7B 선박 Tanker

원유 세정이 계획되어 있으면 사전 이송 점검 사항
Check pre-transfer if crude oil washing is planned

항목 Item	점검 Check	상태 Status	비고 Remark
89	승인된 원유 세정 매뉴얼에 포함된 완성 된 도착 전 원유 세정 체크리스트가 터미널에 전달되었다. (12.5.2, 21.2.3) The completed pre-arrival crude oil washing checklist, as contained in the approved crude oil washing manual, is copied to terminal. (12.5.2, 21.2.3)	☐ Yes	
90	원유 세정 전, 중 및 후에 사용할 원유 세정 체크리스트는 승인된 원유 세정 매뉴얼에 포함된 대로 완료 준비가 되어 있다. (12.5.2, 21.6) Crude oil washing checklists for use before, during and after crude oil washing are in place ready to complete, as contained in the approved	☐ Yes	

Part 7C 선박 Tanker

부두 접안 중 탱크 세정 및/또는 가스 프리 작업 전 점검 사항
Checks prior to tank cleaning and/or gas freeing alongside

항목 Item	점검 Check	상태 Status	비고 Remark
91	화물창 세정 작업에 대한 허가가 확인되었다. (21.2.3, 21.4, 25.4.3) Permission for tank cleaning operations is confirmed.	☐ Yes	
92	가스 프리 작업에 대한 허가가 확인되었다. (12.4.3) Permission for gas freeing operations is confirmed.	☐ Yes	
93	화물창 세정 절차가 합의되었다. (12.3.2, 21.4, 21.6) Tank cleaning procedures are agreed.	☐ Yes	
94	만약 화물창에 출입해야 할 경우, 출입 절차는 터미널과 합의 하였다. If cargo tank entry is required, procedures for entry have been agreed with the terminal (10.5).	☐ Yes	
95	슬롭 육상 수용 설비 및 요구사항은 확인되었다. (12.1, 21.2, 21.4) Slop reception facilities and requirements are confirmed.	☐ Yes	

Part 8	선박 Tanker	이송 중 및 이송 후 재점검 Repetitive check during and after transfer

항목 Item	점검 Check	시간 Time						비고 Remark
재점검 간격 Interval time	시간 hrs							
8	불활성 가스 시스템 압력 및 산소 농도 기록계는 작동한다. Inert gas system pressure and oxygen recorders are operational.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	8. 불활성 가스 장비 압력 및 산소 농도 기록계는 작동한다. (11.1.5.2, 11.1.11)							
9	불활성 가스 시스템 및 관련 장비들은 작동한다. Inert gas system and associated equipment are perational.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	9. 불활성 가스 시스템 및 관련 장비들은 작동한다. (11.1.5.2, 11.1.11)							
11	화물창은 양압을 유지하고 있다. Cargo tank atmospheres are at positive pressure.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	11. 화물창은 양압을 유지하고 있다. (11.1.3)							
17	펜더는 적절하다. Fendering is effective.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	17. 방 현재는 적절하다. (22.4.1)							
18	계류 설비가 적절하다. Mooring arrangement is effective.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	18. 계류 배치가 유효하다. (22.2, 22.4.3)							
19	선박 출입 설비는 안전하다. Access to and from the tanker is safe.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	19. 선박 출입 설비는 안전하다. (16.4)							
20	배수구와 기름받이는 막혀 있다. Scuppers and savealls are plugged.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	20. 배수구와 기름받이는 막혀 있다. (23.7.4, 23.7.5)							
23	거주 구역 외부 출입구는 통제되고 있다. External openings in superstructures are controlled.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	23. 거주 구역 외부 출입구는 통제되고 있다. (23.1)							
24	펌프실 환기는 적절하다. Pumproom ventilation is effective.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	24. 펌프실 환기는 적절하다. (10.12.2)							
32	선박은 합의된 통지 기간 내에 이동할 준비가 되어 있다. Tanker is ready to move at agreed notice period.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	32. 선박은 합의된 통지 기간 내에 이동할 준비가 되어 있다. (9.11, 21.7.1.1, 22.5.4)							
33	통신이 효과적이다. Communications are effective.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	33. 선박 및 육상 간 효과적인 통신 수단이 수립되어 있다. (21.1.1, 21.1.2)							
35	작업 감독과 당직은 적절하다. Supervision and watchkeeping is adequate.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	35. 작업 감독과 당직은 적절하다. (7.9, 23.11)							
36	비상조치를 위한 충분한 인원이 있다. Sufficient personnel are available to deal with an emergency.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	36. 비상시 조치를 위한 충분한 인원이 있다. (9.11.2.2, 23.11)							

Part 8	선박 Tanker	이송 중 및 이송 후 재점검 Repetitive check during and after transfer

항목 Item	점검 Check	시간 Time						비고 Remark
재점검 간격 Interval time	시간 hrs							
37	흡연 제한 및 지정된 흡연 구역은 지켜지고 있다. Smoking restrictions and designated smoking areas are complied with.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	37. 흡연 제한 및 지정된 흡연 구역은 설정되었다. (4.10, 23.10)							
38	나화(裸火)금지는 지켜지고 있다. Naked light restrictions are complied with.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	38. 나화(裸火)금지는 수립되었다. (4.10.1)							
39	위험 구역에서 전기 기기 및 장비 사용 통제는 지켜지고 있다. Control of electrical devices and equipment in hazardous zones is complied with.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	39. 전기 기기 및 전자 기기 사용 통제에 관하여 합의하였다. (4.11, 4.12)							
40 41 42 51	비상 대응 준비는 만족스럽다. Emergency response preparedness is satisfactory.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	40. 선박 및 터미널에서 비상시 탈출할 수단은 각각 수립되었다. (20.5) 41. 소화 설비는 사용할 수 있다. (5, 19.4, 23.8) 42. 유출 방재 자재는 사용할 수 있다. (20.4) 51. 비상 신호와 비상 정지 절차는 합의하였다. (12.1.6.3, 18.5, 21.1.2)							
54	선박과 터미널 간의 전기 절연이 적절하다. Electrical insulation of the tanker/terminal interface is effective.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	54. 선박과 터미널 간의 전기 절연이 효과적이다. (12.9.5, 17.4, 18.2.14)							
55	화물창 통풍 시스템과 밀폐 작업 절차는 합의되었다. Tank venting system and closed operation procedures are as agreed.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	55. 화물창 통풍 시스템과 밀폐 작업 절차는 합의하였다. (11.3.3.1, 21.4, 21.5, 23.3.3)							
85	각 탱크의 불활성 가스 공급 밸브 설정은 합의되었다. Individual cargo tank inert gas valves settings are as agreed.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	85. 각 탱크의 불활성 가스(질소) 공급 밸브는 하역작업 계획에 따라 고정되어 있다. (12.1.13.4)							
86	불활성 가스는 산소 농도가 5% 이하로 공급되고 있다. Inert gas delivery maintained at not more than 5% oxygen.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	86. 불활성 가스는 산소 농도가 5% 이하로 공급되고 있다. (11.1.3)							
87	화물창 하이 레벨 경보는 작동한다. Cargo tank high level alarms are operational.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	87. 화물창 하이 레벨 경보는 작동한다. (12.1.6.6.1)							
서명 Initials								

Part 9	터미널 Terminal	화물 이송 중/후 재점검 repetitive check during and after transfer

항목 Item	점검 Check	시간 Time						비고 Remark
재점검 간격 Interval time	시간 hrs							
18	계류 설비가 적절하다. Mooring arrangement is effective.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	18. 계류 배치가 유효하다. (22.2, 22.4.3)							
19	터미널 출입 수단은 안전하다. Access to and from the terminal is safe.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	19. 선박 출입 설비는 안전하다. (16.4)							
28	방현재는 적절하다. Fendering is effective.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	28. 방현재는 적절하다. (22.4.1)							
31	기름받이와 섬프는 안전하다. Spill containment and sumps are secure.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	31. 기름받이와 섬프는 고정되었다. (18.4.2, 18.4.3, 23.7.4, 23.7.5)							
33	통신은 효과적이다. Communications are effective.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	33. 선박 및 육상 간 효과적인 통신 수단이 수립되어 있다. (21.1.1, 21.1.2)							
35	작업 감독과 당직은 적절하다. Supervision and watchkeeping is adequate.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	35. 작업 감독과 당직은 적절하다. (7.9, 23.11)							
36	비상조치를 위한 충분한 인원이 있다. Sufficient personnel are available to deal with an emergency.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	36. 비상시 조치를 위한 충분한 인원이 있다. (9.11.2.2, 23.11)							
37	흡연 금지 및 지정된 흡연 구역은 지켜지고 있다. Smoking restrictions and designated smoking areas are complied with.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	37. 흡연 제한 및 지정된 흡연 구역은 설정되었다. (4.10, 23.10)							
38	나화(裸火) 금지는 지켜지고 있다. Naked light restrictions are complied with.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	38. 나화(裸火)금지는 수립되었다. (4.10.1)							
39	위험 구역에서 전기 기기 및 장비 사용 통제는 지켜지고 있다. Control of electrical devices and equipment in hazardous zones is complied with.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	39. 전기 기기 및 전자 기기 사용 통제에 관하여 합의하였다. (4.11, 4.12)							
40 41 47 51	비상 대응 준비는 만족스럽다. Emergency response preparedness is satisfactory.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	40. 선박 및 터미널에서 비상시 탈출할 수단은 각각 수립되었다. (20.5) 41. 소화 설비는 사용할 수 있다. (5, 19.4, 23.8) 47. 화물창 세정 요구사항은 합의하였다. (12.3, 12.5, 21.4.1)〈7B/7C 참조〉 51. 비상 신호와 비상 정지 절차는 합의하였다. (12.1.6.3, 18.5, 21.1.2)							
54	선박과 터미널 간의 전기 절연이 적절하다. Electrical insulation of the tanker/terminal interface is effective.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	54. 선박과 터미널 간의 전기 절연이 효과적이다. (12.9.5, 17.4, 18.2.14)							
55	화물창 통풍 시스템과 밀폐 작업 절차는 합의되었다. Tank venting system and closed operation procedures are as agreed.	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
	55. 화물창 통풍 시스템과 밀폐 작업 절차는 합의하였다. (11.3.3.1, 21.4, 21.5, 23.3.3)							
서명 Initials								

선언문(Declaration)

아래에 서명한 우리는 파트 1부터 파트 7까지 적용 가능한 항목들에 대하여 표시한 것과 같이 점검하였고 아래와 같이 서명합니다. We the undersigned have checked the items in the applicable parts 1 to 7 as marked and signed below

	선박 Tanker	터미널 Terminal
파트 1A. 선박 : 입항 전 점검 사항 Part 1A. Tanker: checks pre-arrival	☐	☐
파트 1B. 선박 불활성 가스 장비를 사용할 경우, 입항 전 점검 사항 Part 1B. Tanker: checks pre-arrival if using an inert gas system	☐	☐
파트 2. 터미널 : 입항 전 점검 사항 Part 2. Terminal: checks pre-arrival	☐	☐
파트 3. 선박 : 접안 후 점검 사항 Part 3. Tanker: checks after mooring	☐	☐
파트 4. 터미널 : 접안 후 점검 사항 Part 4. Terminal: checks after mooring	☐	☐
파트 5A. 선박 및 터미널 : 사전 이송 회의 Part 5A. Tanker and terminal: pre-transfer conference	☐	☐
파트 5B. 탱커 및 터미널 : 산적 엑체 화학제품. 사전 이송 점검 사항 Part 5B. Tanker and terminal: bulk liquid chemicals. Checks pre-transfer	☐	☐
파트 5C. 선박 및 터미널 : 산적 액화 가스. 사전 이송 점검 사항 Part 5C. Tanker and terminal: liquefied gas. Checks pre-transfer	☐	☐
파트 6. 선박 및 터미널 : 사전 이송 합의 사항 Part 6. Tanker and terminal: agreements pre-transfer	☐	☐
파트 7A. 선박 일반 : 사전 이송 점검 사항 Part 7A. General tanker: checks pre-transfer	☐	☐
파트 7B. 선박 : 원유 세정 계획이 있다면 사전 점검 사항 Part 7B. Tanker: checks pre-transfer if crude oil washing is planned	☐	☐
파트 7C. 선박 : 화물창 세정 및 또는 가스 프리 전 점검 사항 Part 7C. Tanker: checks prior to tank cleaning and/or gas freeing	☐	☐

ISGOTT 제25장의 지침에 따라, 우리는 최선을 다하여 정확하고 만족스럽게 작성하였으며 선박과 터미널은 화물 이송 작업을 수행하는 것에 합의합니다.
In accordance with the guidance in chapter 25 of ISGOTT, we have satisfied ourselves that the entries we have made are correct to the best of our knowledge and that the tanker and terminal are in agreement to undertake the transfer operation.
또한, 우리는 ISGOTT SSSCL의 파트9 및 파트10의 주석에 따라 선박에서는 ___시간 이내 그리고 터미널에서는 ___시간 이내 재점검하는 것을 합의합니다.
We have also agreed to carry out the repetitive checks noted in parts 9 and 10 of the ISGOTT SSSCL, which should occur at intervals of not more than ___hours for the tanker and not more than ___hours for the terminal.
만약, 우리의 기준으로 어떠한 항목이 변경된다면 즉시 상대방에게 알리겠습니다.
If, to our knowledge, the status of any item changes, we will immediately inform the other party.

선박 Tanker	터미널 Terminal
이름 Name	이름 Name
직책 Rank	직책 Rank
서명 Signature	서명 Signature
날짜 Date	날짜 Date
시간 Time	시간 Time

O. Contact List

Vessel should contact with SK Energy Marine Terminal As First Action for all emergency situations via the UHF radio or Telephone

Contact		Telephone no.
Terminal Control Room	Berth No. 1~2	+82 52 208 2833(UHF Ch. 4E)
	Berth No. 3~8	+82 52 208 2977(UHF Ch.. 4G)
Terminal Emergency Call		+82 52 208 7777
Ulsan VTS(Vessel Traffic Service Center)		VHF CH. 14 / 16

◎ Emergency Contacts

Ulsan Regional Oceans and Fisheries Administration
T. +82-52-228-5500
Seafarers and Maritime Safety Division
T. +82-52-228-5590

Ulsan Port Authority
T. +82-52-228-5300
Port Operation Team
T. +82-52-228-5441

Ulsan Coast Guard
Command Center
T. +82-122
security & rescue section
T. +82-52-230-2441

Ulsan VTS
T. +82-52-230-2550
T. +82-52-230-2650
T. +82-52-230-2750

Ulsan Metropolitan City
Disater and Safety Status Control Center
T. +82-52-229-3119

Korea Marine Environment Managemnt Corporation
Ulsan Branch
T. +82-52-261-3413

Ulsan Quarantine Station
T. +82-52-255-4501

Ulsan Immigration Office
T. +82-52-279-8024

Ulsan Customs
T. +82-52-278-2237 (Day)
+82-52-278-2222 (Night)

Ulsan Harbour Pilots
T. +82-52-261-7703
+82-10-9238-7703

Korea Tugbusiness Corporation
Ulsan Branch
T. +82-52-265-1534