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Yasref Terminal Booklet

General Rules & Information

Version 3

Yasref Terminal Booklet

General Rules & Information

This book is free of charge

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Section 2 - Introduction

Yasref Terminal is designed to load/discharge the refrigerated LPG, Naphtha, Diesel, Gasoline and Benzene products for export and MTBE for import and can accommodate tankers with capacities from (20,000 to 280,000 DWT).

From the terminal's two berths, can be loaded simultaneously at a peak rate of 30,000 bph.

These berths, 71, 72, a 1.85-kilometer long causeway and a 1.15-kilometer pile-supported trestle connect the shore plant to a two-berth, L-shaped of fshore loading facility.

The trestle carries a pipe way for the product, and utility lines, and a 1.5-meter wide pedestrian walkway.

Yasref Solid Handling Berth is designed to load the Pet-Coke and Sulphur products for export and can accommodate Bulk Vessel with capacities from (15,000 to 100,000 DWT). Can be loaded at rate 2,000 MT/Hrs.

KFIP rules and regulations apply to these berths and masters should familiarize themselves with these and ensure they are brought to the attention of their of ficers/crews and ensure that the provisions within these rules and regulations are strictly adhered to.

PORT DESCRIPTION & DEFINITION

Yasref Terminal is located on the Red Sea Coast approximately

Latitude: 23°55'53" N

Longitude: 038°15'04" E

The Port boundaries are given in the Rules & Regulations for Seaports.

THE TERMINAL BOUNDARIES ARE

Yanbu, situated in the Western Province of Kingdom of Saudi Arabia on the shore of the Red Sea, the Terminal boundaries include all of the waters within the boundaries defined

by the following set of coordinates:

Yasref GAS, LIQUID & SOLID TERMINALS

Location	Geographic Coordinates	
	Latitude	Longitude
Berth 71	<i>23° 56' 00" N</i>	<i>38° 14' 32" E</i>
Berth 72	<i>23° 55' 50" N</i>	<i>38° 15' 20" E</i>
Berth 69	<i>23° 56' 22" N</i>	<i>38° 14' 50" E</i>

REFERENCES:

- Saudi Arabian Government Regulations.
- Saudi Ports Rules And Regulations / Saudi Transport Ministry.
- Arab States of The Gulf (GCC) Rules & Regulations for Seaports.
- Saudi Aramco Ports and Terminals.
- IALA System.
- (ISM) International Safety Management Code.
- (SOLAS) International Convention for Guide the Safety of Life at Sea.
- (ISGOTT) International Safety Guide for Oil Tankers And Terminals.
- (MARPOL) Marpol 73/78 Conventions.
- (ICS) International Chamber of Shipping.
- (OCIMF) Oil Companies International Marine Forum.
- (SIGTTO) Society of International Gas Tanker & Terminal Operators.
- (IAPH) International Association of Ports & Harbors.
- (IMSBC) International Maritime Solid Bulk Cargoes Code.
- (BLU Code) The Code of Practice for the Safe Loading and Unloading of Bulk Carriers.
- (IMDG) International code for the maritime transport of dangerous goods.

Section 3 - Purpose

Whether the vessel is loading or discharging at the facility, the aim of booklet is to provide information to the master in order to assist the vessel in:

Arriving and berthing safely at the port (in conjunction with other normal navigation aids, charts, sailing directions and light and radio lists).

Meeting the requirements of the authorities.

Preparing the mooring equipment of the vessel to ensure that the mooring arrangement required for the berth and size of vessel is met.

Lining up the vessel manifold with the relevant loading arms when berthing.

It is expected that the vessel will berth with the tanks ready in all respect to receive the nominated products with all spool and reducers in case need it.

NOTICE:

1. This book is designed as a reference work for the purpose of acquainting Owners, Charterers, Masters of vessels and others with the general conditions, rules, regulations, facilities and available services at all Yasref Terminals.
2. This book does not replace or modify of ficial publications covering the waters, areas, hazards or other subjects to which it pertains, nor is it intended for such purposes.
3. The information contained herein is believed to be accurate. But Yasref makes no warranties and assumes no responsibilities regarding this book or any other information which may appear.
4. The rules prepared by Yasref concerning the safe handling of Gas, Oil, Chemical Tankers and Bulk Carrier at the terminals,
5. the vessel safety inspection check list, and forms of declaration and agreement between the Master of tankers/Bulk carriers and Yasref, are essentially based upon the recommendations on the Safe Transport, Handling and Storage of Dangerous Substances in Port Areas adopted by the Maritime Safety Committee of the International Maritime Organization (IMO) Codes for the Construction and Equipment of Ships carrying Oil products in Bulk/Solid Bulk products. .

Section 4 - Definitions

Approved Equipment

Equipment of a design that has been tested and approved by an appropriate authority such as a government departments or classification society.

The authority shall have certified equipment as safe for use in a specified hazardous or dangerous area.

Authorized Craft

Any boat, small ships, floating barrage or similar craft authorized by the harbor authority to enter or move around within the port and including, where appropriate and in consultation with the terminal, mooring alongside or securing to a tanker.

CCR	On board the vessel, the shipboard cargo control room or that space used for the control of cargo ballast operations. Ashore, refers to the central control room
Chemicals	Substances made up of identical molecules or mixtures of these, generally as defined in IMO, IMDG Code, or IMO international Convention on Marine Pollution (MARPOL) Annex 2.
Chemical Tanker	Any vessel designed, constructed and certified for the carriage in bulk of any liquid product listed in the IBC code.
Combination Carrier	A vessel which is designed to carry bulk liquid chemical or petroleum cargo and/or dry bulk or general cargoes.
ETA	Estimated time of arrival.
Flammable also referred to as combustible	capable of being ignited and of burning, for the purposes of this regulations the terms “flammable” and “combustible” are synonymous.
Gas Free	A tank, compartment or container is gas free when sufficient fresh air has been introduced into it to lower level of levels of any flammable, toxic or inert gases to those required for a specific purpose e.g. hot work, entry etc.
GCC	Gulf Coordination Council
H2S	Hydrogen Sulphide
Harbor Master	The Harbor Master appointed by the port authority and include his authorized deputies, assistants and Pilots
Hot Work	Work involving sources of ignition or temperatures is sufficiently high to case the ignition of the flammable gaseous mixture. This includes any work requiring to use the welding, burning or soldering equipment, blow torches, some power driven tools, portable electric equipment which is not intrinsically safe or contained within an approved explosion-pro of housing, sand blasting and internal combustion engines.

Hot Work Permit	A document issued by the terminal permitting specific hot work to be done during a specified time interval in a defined area.
ICS	International chamber of shipping, the international trade Association and employees Organization for merchant ship operations. ICS issues safety guidance bulletins and warnings based on experience of their membership.
IMO	International Maritime organization, A specialized agency of the United Nations dealing with matters maritime throughout the world, the main conventions issued by IMO includes SOLAS (safety of Life at Sea) MARPOL (dealing with marine pollution), STCW (standards of training, certification and watch keeping) ISPS (International ship & port Security) ISM (International Safety Management).
Inert Condition	A tank or space is in an inert condition when the oxygen content of the atmosphere throughout the tank or space has been reduced to be less of 5% by volume by the introduction of an inert gas.
Inert Gas	The International Convention for the Safety of Life at Sea (SOLAS 1974), as amended, requires that inert gas systems be capable of delivering inert gas with an oxygen content in the inert gas main of not more than 5% by volume for oil tankers.
Intrinsically safe	An electrical circuit or part of a circuit is intrinsically safe if any spark or thermal effect produced normally (that is by breaking or closing the circuit) or accidentally in incapable under prescribed test conditions of igniting a prescribed gas mixture
ISGOTT	The publication “The International Safety Guide for Oil Tankers and Terminals”
ISPS	The International Ship and Port Facility Security Code.
KFIP	King Fahad Industrial Port
Liquefied Gas	A product which is a gas at normal ambient temperatures and which is cooled it below its boiling point to form a liquid
Loading Master	The company appointed the operator and maintain the berths.
LPG	Liquefied petroleum gas, Propane or butane, or a mixture of the two, cooled to a temperature which the product is a liquid.
Main Deck	The main deck of a tank ship is the continuous Steel plating forming the top of the space continuing the cargo tanks, ballast tanks and c of ferdsams.
Marine officer	The person appointed by the harbour Authority to represent the Harbour Master at the jetties.
Master	The master shall be understood to mean the master or his duly authorized deputy or any person who for the time being is in charge of the vessel.
Naked Lights	open flames or fires, lit cigarettes, similar smoking materials, any unconfined sources of ignition, electrical or other equipment liable to cause sparking while in use, unprotected lights bulbs or any surface with a temperature that is equal to or higher than the auto ignition temperature of the products handled.
OCIMF	Oil Company’s international marine forum.

OOW	of ficer of the watch, that of ficer designated by the master to be in charge of cargo and ballast operations for a specific period during the vessel stay in port.
Operation	The loading/discharging and transfer of chemicals, petroleum, ballasting/ de-ballasting, and any other activity normally associated with the handling of cargoes at the berths.
Petroleum	Crude oil and liquid hydrocarbon products, including liquefied petroleum gases, derived from it.
Petroleum Gas	A gas evolved from petroleum, the main constructions of petroleum gases are hydrocarbons but they may also content other substances such as hydrogen sulphide (H ₂ S) or alkyls as minor constituents.
P.F.S.O	Port facility security of ficer
Port Authority	The Port Authority controlling movements and operations within the port of Yanbu, KFIP Yanbu.
Port Control	The service operated from the Port Authority building to control the movement of traffic within the limits of Port Authority area and to coordinate the emergency response within the area.
Regulations	local, National and international rules, regulations, orders and directions including those of the port authority as issue it from time to time including any amendments, additions or modifications made from time to time. They shall be strictly observed at all times within the port and terminal area buy all personnel of vessels including ships, tugs, barges, mooring boats and other crafts.
SOLAS	Safety of Life at Sea convention (as issued by IMO).
STCW	Standards of training, certification, and watch keeping. Part of SOLAS convention (as issued by IMO).
Tank Ship/ Tanker	A vessel designed to carry liquid petroleum cargo including liquid petroleum gases or liquid chemical cargo in bulk, including combination carriers when being used for this purpose.
Terminal	That part of the port of Yanbu including berth 71, 72 and 69 which Yasref is the designated terminal operator.
Terminal Representative	The terminal representative responsible for liaison with a vessel at the terminal concerning safety, pollution avoidance and operational matters. N.B the master remains responsible at all times for operations on board is own vessel.
Vessel	Any ships, dredger, craft or other floating navigable object and includes any tug, water boat, bunker vessel, lighter or other non-tank vessels.

Section 5 - Yasref Terminal General Rules & Information

Navigation Information

Meteorology

Climate:

The climatic conditions affecting Yanbu Terminal are seasonal. In winter onshore, Air temperatures range from 25 degrees centigrade during the day to about 12 degrees centigrade at night. In summer air temperatures range from 35 degrees centigrade during the day to about 25 degrees centigrade at night. Extreme air temperatures recorded in recent years in the area have been 49 degrees centigrade in May and 6 degrees centigrade in February.

Temperatures of fshore are generally several degrees lower. Relative humidity varies throughout the year with average values between 65% and 70% in winter and 50% - 55% in summer, however values of 100% may occur for short periods around dawn. The average annual rainfall taken over a four years period is 3.2 mm.

Winds:

The prevailing wind throughout the year is westerly, with a wind speed 6 kts and above, increasing during the afternoon. Storms occur as frequently as every 50 days, and sometimes can last as long as two weeks, although there is little drop in the barometric pressure, and very rarely any precipitation during these storms.

Wind speeds of up to 50 kts may occur from the northwest and the northeast directions and during the spring and winter months.

Tides & Currents:

The tidal range is about 1 meter at spring tides, but fluctuations due to non-tidal effects are up to 3 meters. Fluctuations due to non-tidal effects are caused by storms, which can cause a mean

sea level drop of 0.5 meter, and a significant increase in mean sea level after the storm or as it subsides. Generally, the tides are semidiurnal with a period of 12hr 25 minutes. Currents in the area are influenced by local wind conditions, tide, and the general circulatory pattern of the Red Sea. See Admiralty Sailing Directions for specific information.

Sea Conditions:

Sea conditions can vary considerably within the port limits. Wave heights in the port area are usually lower than 2 meters during sea breezes.

Sea Salinity And Sea Water Temperature:

Seawater temperature is similar to air temperatures and range between 20 degrees centigrade (77 degrees Fahrenheit) and 31 degrees centigrade (88 degrees Fahrenheit). Salinity varies between 35-39 parts per thousand.

Visibility:

The incidence of fog is rare, but should it occur, (fog horns are provided at both terminals to alert ships in cases of poor visibility) it is more likely during the period from November to April. During the summer months from May to September the incident of poor visibility (less than 5 miles) can be quite high due to mist and haze. Throughout the year, dust storms may occur obscuring the coastline.

Extreme Weather

The extreme temperature occurs in summer time with readings above 49 oC. The rainy season extend from October to April. The maximum rainfall occurs in winter months. Wind speed can reach more than 24 m/s associated with the thunderstorms.

Charts And Publications

Charts:

British Admiralty Charts:

BA 63, 237, 328

Saudi Chart:

17, 171, 175

American Chart:

HO.62016, 62171, 62172

Tide Tables:

British Admiralty Tide Tables, Volume 2 Atlantic and Indian Oceans

Pilot Books:

British Admiralty Red Sea and Gulf of Aden Pilot, BA. 64

Light Lists:

British Admiralty List of Lights and Fog Signals Volume (E).

Navigational Aids & Warnings

The shape and colors of the buoys in the terminal area and approaches comply with the IALA System, Region A.

Entering The Harbor

Navigation & Arrival

Vessels calling at the Yasref Marine Terminals, Yanbu are assigned berths based on a variety of factors including, but not limited to, the following: nomination date, time of arrival, product to be loaded, vessel size and available berths. If there

are no immediate berthing prospects, vessels will be directed to drifting or anchoring.

Arrival Directions

APPROACHING FROM THE NORTH:

24°02'00"N 37°45'00"E

APPROACHING FROM THE SOUTH:

23°27'00"N 38°27'00"E

Documentary Procedures

General Clearance:

On arrival of the ship at anchor or berth, and given that all pre-entry requirements have been fulfilled, the ship will be boarded by the following for completion of the required formalities...

- Customs
- Frontier Force
- Port Health of ficer
- Vessel Agent

Information Common To All Berths

Products Available:

Yasref Terminal able to export Naphtha, Diesel, Gasoline, Benzene, Pet-coke, Sulphur, Propane and Butane.

Bunkers:

Bunker services are not provided at Yasref terminal.

Fresh Water:

Freshwater services are not provided at Yasref terminal.

DOCK DENSITY: 1025

Transfer Material To Vessel:

Transfer material to vessel through tug should have pre-approval from P.F.S.O

Berth Specification:

BERTH	NO. of LOADING ARMS.		
	DIESEL, GASOLINE, LPG	BENZENE	NAPHTHA
71	2	1	1
72	2	3	1

BERTH	MAX LOADING RATE x1000 (BPH/ATM)	
	DIESEL, GASOLINE, LPG, NAPHTHA	BENZENE
71	30	4
72	30	4
BERTH	MAX Discharging RATE x1000 (BPH/ATM)	
	MTBE	
72	with manifold pressure maximum allowed 3.0 bar	

BERTH	COUPLING SIZE	
	BENZENE	GASOLINE, LPG, NAPHTHA, DIESEL & MTBE
71	"16/"14/"12	"16/"14/"12
72	"16/"14/"12	"16/"14/"12

BERTH	NO. of LOADER	MAX LOADING RATE x1000 (MT/H)
69	2	2

YASREF Berth Parameters						
BERTH	Max L.O. A	Max Draft	DWT*1000		Arrival Max Disp*1000	Mooring Lines
			Min	Max		
71	389 M	16 M	20 MT	280 MT	190 MT	12-16
72	389 M	16 M	20 MT	280 MT	190 MT	12-16
69	255 M	15.2 M	15 MT	100 MT	118 MT	8-16

NOTE: All vessels calling Yasref for discharging MTBE or loading Benzene must remove all U / Y pieces, hoses, to allow Yasref terminal operation to connect loading arms to avoid any delay.

Any vessel calling Yasref for discharging MTBE without using IGGS system, will not be accepted.

In case of any delays from the ship side regarding that, the Yasref terminal will issue LOP to the vessel and marked as deficient in the Yasref SAP system.

Berth Construction:

Two loading berths connected to shore by a free standing trestle and a causeway. All two loading berths are fixed structures with fixed loading platforms, breasting dolphins and mooring dolphins.

Berthing & Moorings:

- Berthing and un-berthing operations are performed by King Fahad Industrial Port. However, wind, sea and tidal conditions have to be within acceptable limits, so that during the final docking, the maximum berthing velocity and maximum approach angle is not being exceeded.
- Terminal Mooring dolphins consist of three hooks, capstans, and a winch for connecting Mooring lines. Also, there are two Breasting Dolphins on each berth.
- Port mooring launches assist during mooring operations. The mooring crew will provide suitable messenger for heaving in mooring lines.
- Each loading berth has a gangway equipped with a self-adjusting gangway, which will be provided to the ship, and will be the only authorized access to and from ship for all personnel, Ship ladder / gangway can be requested in-case required by the terminal.

Weather Limitations:

Cargo operations are normally suspended if wind speed exceeding 30 knots.

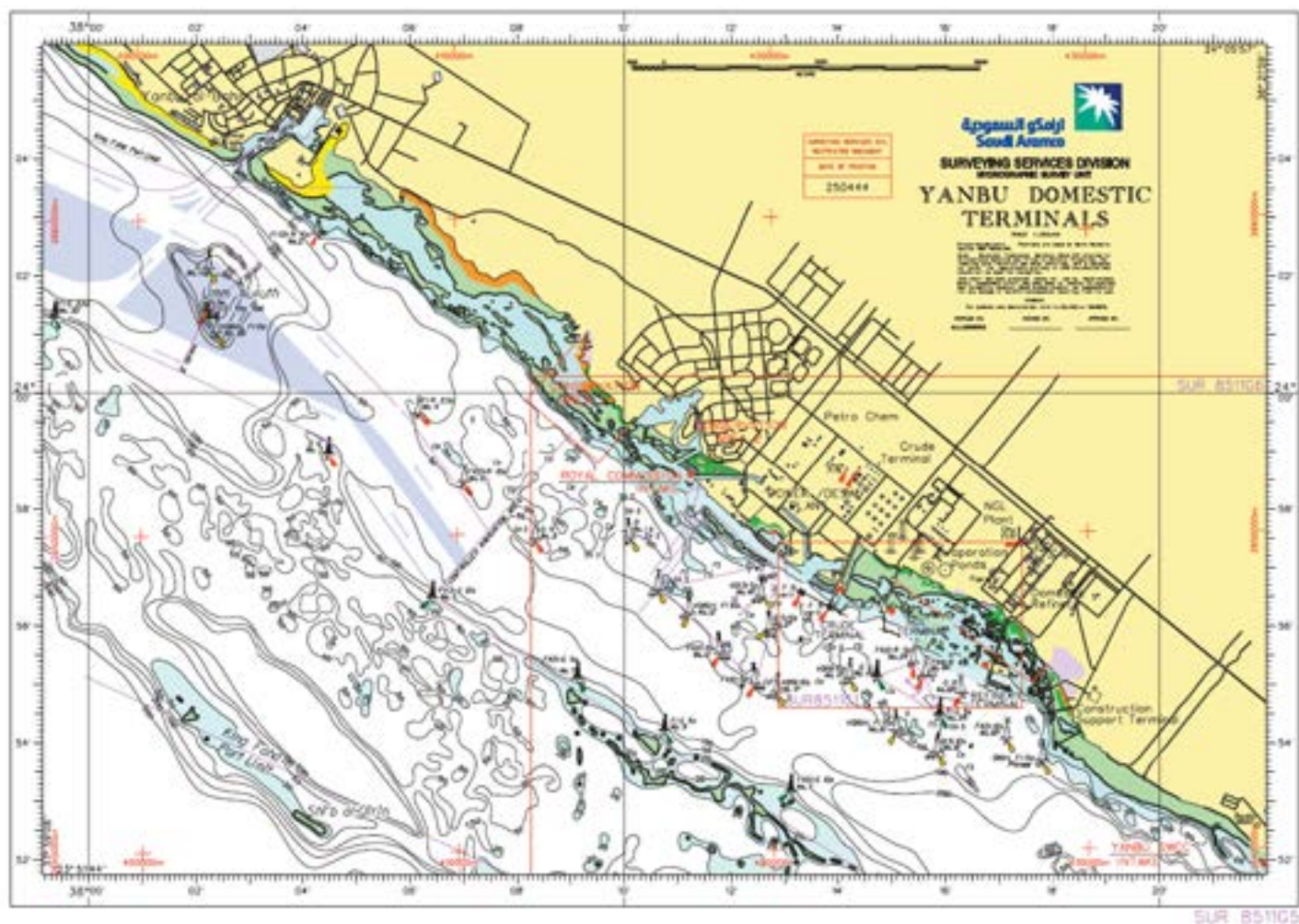
Medical & Hospital Services

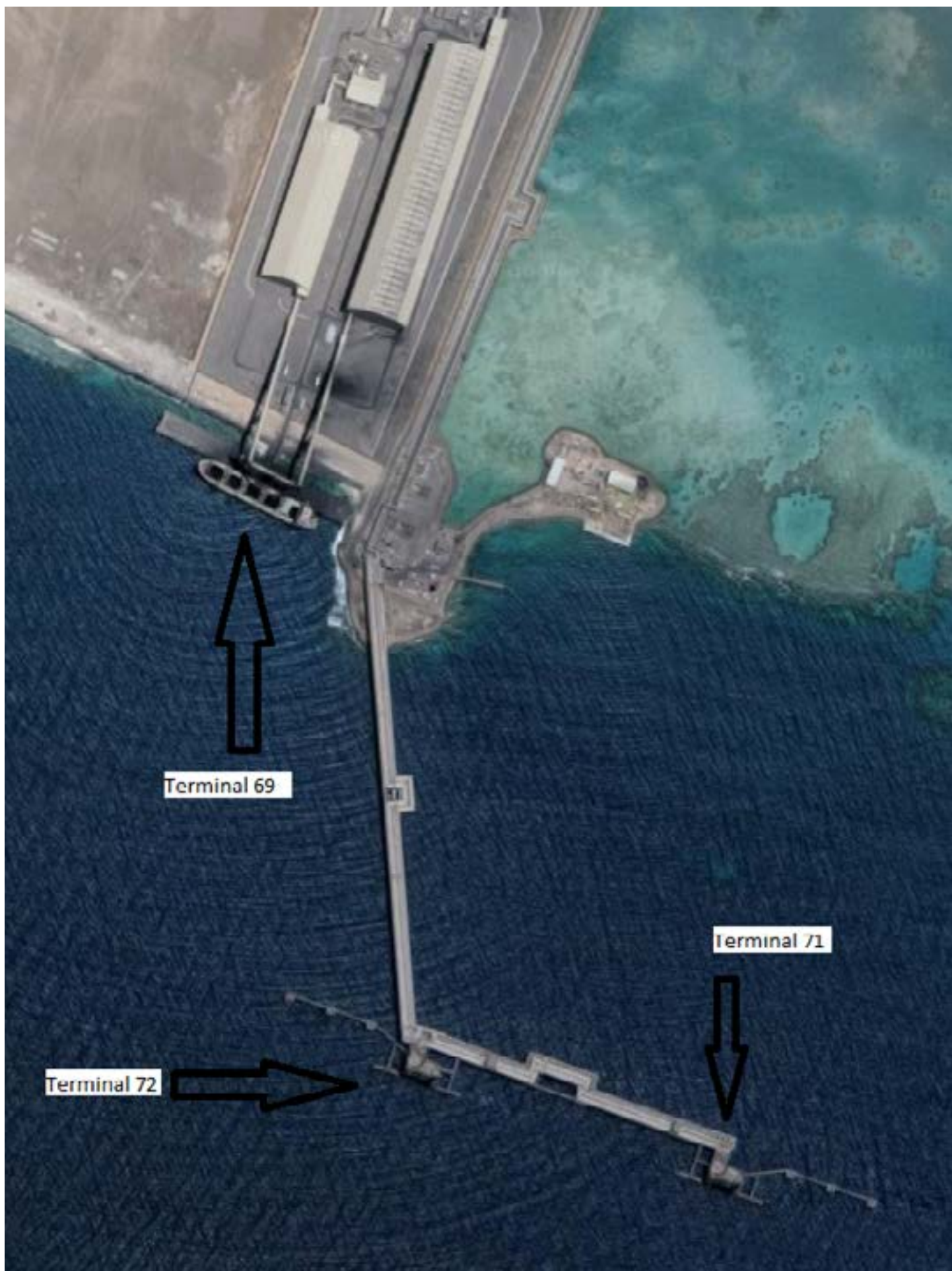
Medical facilities are available for treatment of emergency cases. Masters should if possible, provide advance notice to their agent of their requirements, together with name, rank, nationality, passport or seaman's identity book number including date of issue and place of issue.

Transport, Crew Changes & Shore Leave

Masters should advise their agent of repatriation requirements as far in advance as possible. Agent should coordinate with port authority & port control; Agents require the following information for each crewmember that is to be repatriated:

Name, Rank, Nationality, Passport or seaman's identity book number including date of issue and place of issue, and final destination.





Government Regulations - (Extracts & Procedures)

General

Saudi Arabian Government regulations and Yasref rules and Regulations as set forth in this document are strictly enforced and Masters Having any doubts concerning the interpretation of these rules and Regulations are urged to consult their agent.

At all times while in Saudi Arabian territorial waters and within the geographical boundaries of Yasref Terminal. At berth, the vessel and its personnel are under the jurisdiction of and shall comply fully with Saudi Arabian laws.

Shipping Agent Requirement:

Every vessel must have a Saudi shipping agent before entering Saudi Arabian territorial waters. Vessels calling at Yasref Terminal should address all messages concerning ship's business to their agents. The vessel's agent handles matters concerning provisions supply, minor repairs, local medical, or hospital services, mail, crew changes, etc.

Gcc Rules And Regulations For Seaports

Every vessel must have a copy of both the current **GCC Rules and Regulations for Seaports** on board, or must obtain copies of these publications immediately on first arrival in Saudi Arabia.

The **GCC Rules and Regulations for Seaports** is issued jointly by the Saudi Arabian Government and the Cooperation Council for The Arab States of the Gulf (GCC) dates. The latest edition of this publication is dated 2006. Neither non-possession of nor ignorance of the rules and regulations contained in either of the above publications, or in any amendments There to published by the Saudi Arabian Government

after the effective date of this publication, will be considered an excuse for violation of said rules and regulations, nor will it excuse the violator from the imposition of penalties by the Saudi Arabian Government.

Masters should consult the above publications for full details regarding the procedures and conduct of the vessel and crew. The vessel's agent will, upon request, provide details of any changes to either of the above publications.

Arrival Entry Requirements

The Master is responsible for complying fully with the requirements of all Saudi Arabian Government Departments, Ministries, Agencies and Organizations and the requirements contained in this publication.

Particular attention should be paid to the requirements of Saudi Customs, Frontier Force, Immigration and Port Health Authorities. Masters requiring advice on these requirements should contact their local agents.

Pre-Arrival Information

The GCC Rules and Regulations for Seaports specifies that certain information must be received by the Port Management, either directly or through the vessel's agents before that vessel arrives at the port and notification of ETA 5 days, 2 days, and 1 day prior to arrival. Vessels which fail to comply with this requirement may be delayed and/or subject to a fine as laid down in the rules and regulations.

Arrival Documentation

The GCC Rules and Regulations for Seaports and other applicable Saudi Arabian Government rules and regulations specify that the Master shall present or make available for inspection

various papers and documents.

The following valid and current documents must be made available on arrival to the vessel agent and to boarding Saudi Arabian.

Government And Officials And Representatives:

- Safety Management Certificate (SMC) issued in accordance with the International Safety Management Code (ISM CODE) and Chapter IX of the International Convention for the Safety of Life at Sea (SOLAS)
- International Ship Security Certificate (ISSC) or Interim ISSC issued in accordance with the International Ship & Port Facility Security Code (ISPS Code) and the 2002 SOLAS Amendments
- Certificate of Insurance or other Financial Security in Respect of Civil Liability for Oil Pollution Damage (CLC Certificate) issued by the vessel's Flag State in accordance with Article VII of the International Convention on Civil Liability for Oil Pollution Damage, 1992; or an original Protection and Indemnity (P&I) Club Certificate of Entry for the vessel issued by a member club of the International Group of P&I Clubs; or original documentation evidencing other equivalent P&I Coverage, including pollution liability coverage, acceptable to Yasref.
- Maritime International Declaration of Health.
- Valid De-ratting or Exemption Certificate.
- Crew List (including supernumeraries) up to 6 copies.
- Valid Smallpox Vaccination Certificates.
- Valid Inoculation Certificates against communicable diseases prevailing at previous ports of call.
- Current vessel's logbook.

The above list is intended only as a guide. Masters are advised to consult the GCC Rules

& Regulations

For Seaports and with their Agent for more precise and up to date requirements.

Radio Messages

Upon first contact with **KFIP (King Fahad Industrial Port)** arriving vessels will receive a radio message requesting quarantine information. Vessels will not be accepted for berthing until the quarantine information is received. Until that time, other ship movements will be prioritized, including movements that could cause the ship to lose its turn at berth.

Clearance Procedures

Dependent on the type of berth and weather conditions, ships' clearing authorities will board the vessel at berth where the vessel must be in a safe position and provide a safe access for the officials to embark and disembark before and after clearance.

Procedures For Alongside Berths

In the case of ships assigned to alongside berths, the Harbor Pilot may board the vessel before it has been given quarantine Clearance. Ship or shore gangways, as appropriate, shall be rigged and ready to provide safe access for the Quarantine officer, custom officer, CG and Agent.

No one other than the Government Quarantine officer or KFIP Harbor Pilot(s) may board or disembark from ships at berth until the vessel receives quarantine clearance. This includes the Agent's representative(s) and pier personnel.

Quarantine Signals

The following quarantine signals shall be displayed by all vessels approaching port and at all times when in port until pratique is granted...
Sunrise to Sunset - Quarantine Flag (Q)

Sunset to Sunrise - Red over White Signal Lights.

Prohibited Articles

All materials exported from or imported into Saudi Arabia are subject to examination by customs authorities.

The import of certain articles is strictly prohibited. Such articles include, but are not limited to, the following:

- Explosives and firearms including air rifles.
- Implements of war of any kind including antique weapons.
- Religious matter not pertaining to the Muslim faith.
- Playing cards and gambling devices
- Narcotics and all other non-prescription drugs.
- Alcoholic beverages of any description.
- Printed materials, photographic matter or video tapes depicting anything which could be considered pornographic.

Due consideration should be given to the religious beliefs of the Pilot team and any other Saudi Nationals that are accommodated

On board with regard to consumption of pork products during the vessel's stay at Yasref terminals.

Sealed Store Rooms /Bonded Lockers

Any prohibited article, which is onboard, any vessel calling at any Saudi Arabian port shall be secured in an appropriate locked Storeroom, which will be sealed by the authorities. The seals must remain intact throughout the entire period of the Vessel's stay in Port and must not be broken until after the vessel has finally departed for a port in another country.

The authorities may carry out occasional inspections to ensure that the seals are intact and that no prohibited matter is in use.

Smuggling Or Trafficking In Prohibited Articles

Smuggling or trafficking in any prohibited article between vessels or between vessel's crews and shore personnel is strictly prohibited.

Saudi Arabian Flag

The flag of the Kingdom of Saudi Arabia must be hoisted by every vessel entering the territorial waters of Saudi Arabia, and shall be flown from the foremast of the vessel while in Port both by day and by night. This flag shall be clean and in good condition.

Masters should obtain this flag before arrival, but if circumstances render this impossible, a flag shall be obtained from the ship's agent.

Vessels flying the flag of Saudi Arabia incorrectly or flying an incorrect replica of the Saudi flag will not be berthed.



Radio Silence At Berth

The use of telegraphic transmitting equipment on a vessel is strictly forbidden during her stay in port.

The use of VHF marine frequencies within the port shall be limited to:

- Reporting information to KING FAHAD INDUSTRIAL PORT CONTROL.
- Traffic Information.
- Emergency calls.
- Any other information necessary for port operations.

Radio traffic is only allowed on the frequencies

authorized by the KING FAHAD INDUSTRIAL
PORT CONTROL.

Gsm Telephones

The use of GSM telephones is strictly prohibited in hazardous (classified) locations on a vessel during her stay in Yasref Terminal.

Photography

The use of photographic equipment of any kind is strictly prohibited while in terminal. Cameras are subject to seizure by the authorities.

Disembarkation

Crew members are not permitted ashore for ANY PURPOSE WHATSOEVER (including reading the vessel's draft) until Pratique is Granted and then only if engaged in operational duties. No visiting between vessels at berths is permitted.

All shore leave is contingent upon compliance with Saudi Arabian quarantine and passport regulations. For current details concerning these regulations and shore leave restrictions, the ship's agents must be consulted. Failure to comply with the regulations may result in severe penalties.

Penalties

Penalties for violations of Saudi Arabian Government Regulations are severe.

They include CAPITAL PUNISHMENT FOR DRUG SMUGGLING OR TRAFFICKING and considerable fines and/or delays to vessels for other offenses.

WARNINGS

Smoking

There is total ban in force on the terminal and on-board vessels alongside, except in those enclosed spaces on-board specifically appointed by the master and terminal representative as “smoking areas “. Failure to comply with these rules will involve ending of operation and may result in the vessel leaving the terminal until an investigation and receipt of written assurance from the master that effective control has been set up.

Arrestment of vessels and cargo

Court procedures in Saudi Arabia allow for the arresting of vessels and cargo in certain circumstances during court proceedings. If the vessel is arrested while on the berth, Yasref may wish to gain approval from the court to have the vessel moved to another berth, anchorage or mooring within the port. We expect the owner, master and agents to cooperate with any such directions as issued by the court.

Alcohol and drugs

Master are advised that the possession and of alcohol and non-prescription drugs is strictly prohibited while the vessel is in port.

Pollution

It is an offence to spill any oil or chemicals, dump garbage, emit excessive funnel smoke.

All incidents will be investigated and prosecution could result.

In case of emergency, raise a signal which is:

A succession of long blasts on the ship's whistle.

Taking photos or videos of Yasref restricted facilities and operating areas (on-board and off-board) without the required approval is strictly prohibited. Posting, forwarding, or exchanging emails or social media containing any materials taken within a restricted area is also prohibited.

Section 6 - Safety Requirements

Yasref Safety Requirements

Yasref requires that vessels comply with all the relevant safety requirements as specified in latest edition of the ICS/OCIMF publication "International Safety Guide for Oil Tankers and Terminals". (ISGOTT)

Responsibility of Masters

The Master shall be responsible at all times for the safety of his vessel and shall make provision to exercise all the necessary precautions.

Master's Safety Declaration

It is a condition to entry into Yasref Terminals that Masters of all vessels shall contract to comply with Yasref safety requirements by signing the "Instructions to masters & Conditions of use of Port" form when presented.

Safety Checks

Prior to start of loading and later at several times during the loading, a Loading Master, who shall be accompanied by one of the ship's officers, will check to ensure that safe loading practices are being observed by both the ship and the shore crews. The Yasref "Safety Check List" will be used to record the results.

The Yasref safety requirements are enumerated in short question form in the Yasref safety checklist, but a more detailed explanation of those requirements is given hereunder. The checklist essentially follows the ISGOTT guide.

- Each of the following requirements is titled and numbered to correspond directly with the numbered questions of the Safety Checklist.
- Vessels shall comply fully with all of these requirements at all times when berthed at Yasref Terminals. In addition, vessels shall comply fully with requirement number 16

(Tank Lids) at all times when at berth and at other times as stated.

Authority of The Terminal Loading Master

Yasref Terminal Loading Master are authorized to suspend operations in the event that any of safety rules are violated, or if any other hazardous situation is observed.

Risk of Heat Exhaustion

Proper precautions should be taken to avoid sun stroke and heat exhaustion, particularly during the summer and early fall months. In view of the necessity to close down accommodations while loading/ discharging volatile cargoes, AIR CONDITIONING PLANTS aboard ships shall be in good working condition at all times.

Volatile And Non-Volatile Petroleum

Due to the variety of petroleum products available for loading at Yasref facility, all vessels arriving to load any petroleum product whether volatile or non-volatile at any berth shall be required to observe the Safety Regulations.

Precautions Against Static Ignition

Special precautions are required for loading static accumulator oils. Such oils include Gasoline, Diesel and Heavy Naphtha.

The following regulations are the minimum requirements and do not relieve the Master, Ship or Owner, from complete responsibility for the safe condition of the ship's tanks:

- a) Ships loading, Gasoline, Diesel and Benzene shall be accepted if the ship's tanks meet one of the following conditions, whichever is applicable:
For ships that are required to meet the SOLAS Convention, the ship's tanks must be

presented in inerted condition with oxygen content of 5 percent or less oxygen by volume. (5 percent or less oxygen by volume for Benzene, Benzene vessel shall arrive with Maximum tanks pressure approx. 10-15 mbar.)

This condition shall also be applicable if the ship arrives with part cargo. Yasref Representative will check oxygen content using an oxygen detector.

For ships, that are not required to meet the SOLAS Convention, the ship's tanks must be presented in gas free condition with combustible gas content of less than 0.4 of the Lower Explosive Limit (L.E.L.). Yasref Representative will check the combustible gas content using a combustible gas detector.

Yasref Representative shall check combustible gas content, on a regular basis, using combustible gas detector.

- b) Subject cargoes shall not be loaded if the loading line or the ship's tanks are known, or are discovered, to contain water. In such cases, water shall be flushed from the line to slop and/or ship's tanks shall be made as dry as possible.
- c) To control electrostatic generation, the initial loading rate for all subject products, shall be restricted to a velocity of 1.0 meters per second in the branch line to each individual tanks (ISGOTT) until the tank has been filled to a sounding of 1.0 meter. The Master shall be responsible for calculating the maximum initial loading rate based on ISGOTT recommendation and the design of the ship and shore facilities, and in accordance with the following table:

Minimum diameter of Piping (mm)	Approx. Flow Rate (m ³ /hour)
80	17
100	29
150	67
200	116
250	183
305	262
360	320
410	424
460	542
510	676
610	987
710	1354
810	1782

ISGOTT Table 11.1 – Rates corresponding to 1.0 meter/second.

NOTE: *That the diameters given are nominal diameters, which are not necessarily the same as actual internal diameters.*

- d) After each tank has been filled to a sounding of 1.0 meter with tank inlets submerged, the loading rate can be increased to the maximum permitted by the design of the ship and of the shore facilities.
- e) Introduction of any dipping, ullaging or sampling equipment into an open tank shall not be permitted until at least 30 minutes after loading to that tank has been stopped. (ISGOTT Section 3.2.1 General precautions against electrostatic hazards.)

Emergency Signal

In the event of a fire or other emergency, the vessel shall sound a series of Continuous short blasts on the ship's whistle.

Gas Freeing And Tank Cleaning

No gas freeing or tank washing shall be carried out at berth.

NOTE: *All vessels calling Yasref terminals for loading or discharging, vessels tanks must be freeing of gas. The oxygen content must be not more than 5%.*

Any vessel berthing with high oxygen content will de-berthing immediately and all costs and expenses for double berthing will payed by vessel.

Repairs

Repair to main engines or deck machinery is prohibited when the vessel is secured to any berth. Repairs or maintenance of any other kind that may produce a source of ignition shall not be undertaken without the agreement in writing of the Terminal Representative.

Restrictions

Disregard of or failure to fully comply with any of the Safety Rules or any safety regulations generally accepted and practiced in the marine transport industry will result in the suspension of all operations and the vessel may be required to leave the berth.

Safety violations caused by the condition of the vessel or the actions or inaction of the vessel's personnel will result in the suspension of loading operations or the vessel being removed from the berth.

Removal from the berth as a result of safety violations or deficiencies will be solely at the vessel's expense and Yasref shall not have any responsibility or liability for any resulting delay to the vessel.

Vessels with unacceptable safety performances will not be permitted to berth at Yasref facilities on future visits.

Emergencies, Accidents & Delays At Berth

These procedures are outlined here to advise Masters of the actions required by them and the actions, which will be taken by the Terminal Representative in the event of a vessel emergency or non-emergency vessel casualty while a vessel is at a Yasref Terminal. The course of action followed by the Terminal Representative will be dictated by the particular facts and circumstances of the incident and whether the ship is at berth

Section 7 - Chemical Hazards

HYDROGEN SULFIDE HAZARDS

It is recommended that Owner's instructions and the ISGOTT recommendations in respect of H₂S hazards be reviewed.

CHEMICAL HAZARD BULLETINS

BENZENE

Version No. 1.0

Date: 30 Oct. 2013

MATERIAL SAFETY DATA SHEET



SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier/ Name:	Benzene	NFPA Classification	Health Hazard: 2 Fire Hazard: 3 Reactivity Hazard: 0
NFPA Ratings: 0=Insignificant/No Hazard. 1=Slight Hazard. 2=Moderate Hazard. 3=High/Serious Hazard. 4=Extreme/Severe Hazard			
Product Recommended Use:	Petrochemical Industry: Solvent and raw material for petrochemicals		
Manufacturer and Supplier's Name:	YASREF		
Manufacturer and Supplier's Address:	Yanbu Aramco Sinopec Refining Company (YASREF) Limited, P. O. Box 32223, Yanbu Industrial City 41912, Kingdom of Saudi Arabia		
Emergency Telephone Number:	+966-14-398-1222	YASREF Emergency Center	
Telephone Number for Information:	+966-14-398-2096	Technology Unit Supervisor	
	+966-14-398-1920	Manager, Technical Services Department	

SECTION 2: HAZARD IDENTIFICATION

Emergency Overview

Physical state: Liquid **Color:** Clear, colorless **Odor:** Sweet, distinct

OSHA Hazards : Flammable Liquid, Carcinogen, Moderate skin irritant, Moderate eye irritant, Mutagen, Target Organ Effects

GHS Classification:

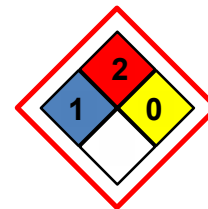
Flammable liquids, Category 2
Skin irritation, Category 2
Eye irritation, Category 2A
Germ cell mutagenicity, Category 1B
Carcinogenicity, Category 1A
Aspiration hazard, Category 1
Acute aquatic toxicity, Category 2
Specific target organ systemic toxicity - repeated exposure, Category 1, Inhalation Oral Dermal, Blood

DIESEL, ALL GRADES

Version No. 1.0

Date: 30 Oct. 2013

MATERIAL SAFETY DATA SHEET



SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier/ Name:	Diesel, All Grades	Other Classification: Class 3: Flammable Liquid Hazardous Waste ID: 17 Hazard Identification No. (HIN): 30
Product Recommended Use:	Fuel	
Manufacturer and Supplier's Name:	YASREF	
Manufacturer and Supplier's Address:	Yanbu Aramco Sinopec Refining Company (YASREF) Limited, P. O. Box 32223, Yanbu Industrial City 41912, Kingdom of Saudi Arabia	
Emergency Telephone Number:	+966-14-398-1222	YASREF Emergency Center
Telephone Number for Information:	+966-14-398-2096	Technology Unit Supervisor
	+966-14-398-1920	Manager, Technical Services Department

SECTION 2: HAZARD IDENTIFICATION

UN GHS Classifications:

- Flammable Liquids - Category 3
- Skin Corrosion/irritation - Category 2
- Germ Cell Mutagenicity - Category 2
- Carcinogenicity - Category 2
- Specific Target Organ Toxicity (Single Exposure) - Category 3 (respiratory irritation, narcosis)
- Aspiration Hazard - Category 1
- Hazard to the Aquatic Environment, Acute Hazard - Category 3

GHS Labeling:



Symbol(s): Flame, Health Hazard, Exclamation Mark, Environment

Signal Word: Warning

GASOLINE, ALL GRADES

Version No. 1.0

Date: 30 Oct. 2013

MATERIAL SAFETY DATA SHEET



SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier/ Name:	Gasoline, All Grades	Other Classification: Class 3: Flammable Liquid Hazardous Waste ID: 17 Hazard Identification No. (HIN): 33
Product Recommended Use:	Fuel	
Manufacturer and Supplier's Name:	YASREF	
Manufacturer and Supplier's Address:	Yanbu Aramco Sinopec Refining Company (YASREF) Limited, P. O. Box 32223, Yanbu Industrial City 41912, Kingdom of Saudi Arabia	
Emergency Telephone Number:	+966-14-398-1222	YASREF Emergency Center
Telephone Number for Information:	+966-14-398-2096	Technology Unit Supervisor
	+966-14-398-1920	Manager, Technical Services Department

SECTION 2: HAZARD IDENTIFICATION

UN GHS Classifications:

Physical Hazards:

- Flammable Liquid – Category 2

Health Hazards:

- Skin Corrosion/ Irritation – Category 2
- Germ Cell Mutagenicity – Category 1B
- Carcinogenicity – Category 1B
- Reproductive Toxicity – Category 1A
- Specific Target Organ Toxicity (Single Exposure) – Category 3 (respiratory irritation, narcotic effects)
- Specific Target Organ Toxicity (Repeat Exposure) – Category 1 (liver, kidneys, bladder, blood, bone marrow, nervous system)
- Aspiration Hazard – Category 1

Environmental Hazards:

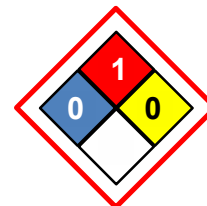
- Hazardous to the Aquatic Environment:
 - Acute Hazard – Category 3
 - Chronic Hazard – Category 2

PETROLEUM COKE

Version No. 1.0

Date: 30 Oct. 2013

MATERIAL SAFETY DATA SHEET



SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier/ Name:	Petroleum Coke	NFPA Classification	: Health Hazard: 0 Fire Hazard: 1 Reactivity Hazard: 0
		NFPA Ratings: 0=Insignificant/No Hazard. 1=Slight Hazard. 2=Moderate Hazard. 3=High/Serious Hazard. 4=Extreme/Severe Hazard.	
Product Recommended Use:	Fuel		
Manufacturer and Supplier's Name:	YASREF		
Manufacturer and Supplier's Address:	Yanbu Aramco Sinopec Refining Company (YASREF) Limited, P. O. Box 32223, Yanbu Industrial City 41912, Kingdom of Saudi Arabia		
Emergency Telephone Number:	+966-14-398-1222	YASREF Emergency Center	
Telephone Number for Information:	+966-14-398-2096	Technology Unit Supervisor	
	+966-14-398-1920	Manager, Technical Services Department	

SECTION 2: HAZARD IDENTIFICATION

Classifications	: Combustible Dust
Pictograms	: None
Signal Word	: WARNING
Hazard Statements	: May form combustible dust concentrations in air. Excessive exposure may cause skin, eye or respiratory tract irritation.
Precautionary Statements	
Prevention	: Avoid accumulations of finely ground dust. Keep away from flames and hot surfaces. No smoking. Wear gloves, eye protection and face protection as needed to prevent skin and eye contact with liquid. Wash hands or liquid-contacted skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust. Use only outdoors or in a well-ventilated area.

SULFUR

Version No. 1.0

Date: 30 Oct. 2013

SAFETY DATA SHEET



SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier/ Name:	Sulfur	NFPA Classification	Health Hazard: 2 Fire Hazard: 1 Reactivity Hazard: 0
NFPA Ratings: 0=Insignificant/No Hazard. 1=Slight Hazard. 2=Moderate Hazard. 3=High/Serious Hazard. 4=Extreme/Severe Hazard			
Product Recommended Use:	Raw material for sulfuric acid and other chemicals		
Manufacturer and Supplier's Name:	YASREF		
Manufacturer and Supplier's Address:	Yanbu Aramco Sinopec Refining Company (YASREF) Limited, P. O. Box 32223, Yanbu Industrial City 41912, Kingdom of Saudi Arabia		
Emergency Telephone Number:	+966-14-398-1222	YASREF Emergency Center	
Telephone Number for Information:	+966-14-398-2096	Technology Unit Supervisor	
	+966-14-398-1920	Manager, Technical Services Department	

SECTION 2: HAZARD IDENTIFICATION

Classification :	Skin corrosion/irritation -- Category 2 Acute toxicity, Inhalation -- Category 4
Hazards not Otherwise Classified:	Contains poisonous hydrogen sulfide gas
WARNING:	May form combustible dust concentrations in enclosed spaces during handling Causes skin irritation. Contains poisonous hydrogen sulfide gas. Harmful if inhaled.
Label Element	
Signal Word:	Warning

Sour Naphtha

Version No. 1.0

Date: 01/26/2017

MATERIAL SAFETY DATA SHEET



SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier/ Name:	Sour Naphtha (Gasoline Range)	NFPA Classification	Health Hazard: 2 Fire Hazard: 4 Reactivity Hazard: 0
		NFPA Ratings:	0=Insignificant/No Hazard. 1=Slight Hazard. 2=Moderate Hazard. 3=High/Serious Hazard. 4=Extreme/Severe Hazard
Product Recommended Use:	Petrochemical Industry: Solvent and raw material for petrochemicals		
Manufacturer and Supplier's Name:	YASREF		
Manufacturer and Supplier's Address:	Yanbu Aramco Sinopec Refining Company (YASREF) Limited, P. O. Box 32223, Yanbu Industrial City 41912, Kingdom of Saudi Arabia		
Emergency Telephone Number:	+966-14-398-1222	YASREF Emergency Center	
Telephone Number for Information:	+966-14-398-1700	HSE Hotline	
	+966-14-398-1256	Manager, HSE	

SECTION 2: HAZARD IDENTIFICATION

Emergency Overview

Physical state: Liquid **Color:** Transparent to Light Green **Odor:** Naphtha Petroleum

GHS Classification:

contain sulphur components
Harmful or fatal if swallowed, inhaled or absorbed through skin
May cause CNS depression
Can produce skin irritation upon prolonged or repeated contact
Keep away from heat, sparks and open flame
Wash thoroughly after handling
Contains petroleum distillates if swallowed, do not induce vomiting since aspiration into the lungs will cause chemical pneumonia
Avoid breathing vapors or mists
Used only with adequate ventilation and
Obtain prompt medical attention. Keep out of reach of children.

NAPHTHA PETROLEUM

INGREDIENTS	CAS NO	%	8HR OEL
benzene	71-43-2	-	3.2 mg/m3
n-hexane	110-54-3	-	72 mg/m3
cyclohexane	110-82-7	-	350 mg/m3
n-heptane	142-82-5	-	1640 mg/m3



UN No: 1268
 Hazchem Code: 3YE
 DG Class: 3
 Subsidiary Risk: **Not Applicable**
 Packing Group: II
 Poisons Schedule: S5



NFPA Rating:

- 0: Minimum
- 1: Low
- 2: Moderate
- 3: High
- 4: Extreme

HEALTH HAZARD INFORMATION



Acute Health Effects: HARMFUL-May cause lung damage if swallowed.
 Vapours may cause drowsiness and dizziness.

PRECAUTIONS FOR USE



Appropriate engineering controls:	Mechanical exhaust recommended
Glasses:	Consider chemical goggles.
Gloves:	PVC chemical resistant type. Neoprene.
Respirator:	Type AX Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)
Storage and Transportation:	Store in cool, dry, protected area. Restrictions on Storage apply. Refer to Full Report.
Fire/Explosion Hazard:	HIGHLY FLAMMABLE. Vapours/gas heavier than air. Toxic smoke/fumes in a fire.
Environment:	Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. Use appropriate container to avoid environmental contamination. Avoid release to the environment. Refer to special instructions/Safety data sheets.

PROPERTIES



Liquid.
 Does not mix with water.
 Floats on water. Highly flammable.

EMERGENCY



FIRST AID

Swallowed:	Contact Doctor or Poisons Centre. Give glass of water.
Eye:	Wash with running water (15 mins). Medical attention.
Skin:	Remove contaminated clothing. Wash with soap & water.
Inhaled:	Fresh air. Rest, keep warm. If breath shallow, give oxygen. Medical attention.
Advice To Doctor:	Evaluate for respiratory distress. Consider lavage with cuffed tube. NO adrenalin.
Fire Fighting:	Keep containers cool. Foam.
Spills and Disposal:	Spilled liquid has low temperature and evaporates quickly. Eliminate ignition sources. Consider evacuation. Pollutant. Prevent from entering drains. Contain spillage by any means. Control vapour with water spray/ fog. Absorb with dry agent. Stop leak if safe to do so.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



Explosive	Toxic	Radioactive	Oxidizing
x	x	x	x

x — Must not be stored together

BUTANE**INGREDIENTS**

butane

CAS No

106-97-8.

%

>=99

8hr OEL

-

NFPA RATING

NFPA Rating: 0: Minimum, 1: Low, 2: Moderate, 3: High, 4: Extreme



UN No: 1011

Hazchem Code: Not Applicable

DG Class: 2.1

Subsidiary Risk: Not Applicable

Packing Group: Not Applicable

Poisons Schedule: Not Available

PROPERTIES

Gas. Does not mix with water. Floats on water. Extremely flammable.

EMERGENCY**FIRST AID****SKIN:**

Wash with soap

For cold burns, immerse in cold water. Wash with soap & water, apply dressing.

FIRE FIGHTING:

Keep containers cool.

Water spray/ fog.

SPILLS AND DISPOSAL:

Eliminate ignition sources.

Consider evacuation.

Prevent from entering drains.

Contain spillage by any means.

PRECAUTIONS FOR USE**GLASSES:**

Consider full face-shield.

RESPIRATOR:

Type AX Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

STORAGE AND TRANSPORTATION:

Store in cool, dry, protected area.

FIRE/EXPLOSION HAZARD:

HIGHLY FLAMMABLE.

Vapours/gas heavier than air.

Toxic smoke/fumes in a fire.

Risk of explosion if heated under confinement.

HEALTH HAZARD INFORMATION**ACUTE HEALTH EFFECTS:****CHRONIC HEALTH EFFECTS:****SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS**

			
Explosive X	Toxic X	Radioactive X	Oxidizing X

X: Must not be stored together

For further information call Environmental Protection: 880-9714 (DH) or 427-0158 (JID)

For proper disposal methods and locations for the chemical or chemical contaminated material, contact the Environmental Engineering Division on 880-9767

PROPANE

INGREDIENTS

propane

CAS No

74-98-6

%

>99

8hr OEL

-

NFPA RATING



NFPA Rating: 0: Minimum, 1: Low, 2: Moderate, 3: High, 4: Extreme



UN No: 1978

Hazchem Code: 2YE

DG Class: 2.1

Subsidiary Risk: Not Applicable

Packing Group: Not Applicable

Poisons Schedule: Not Available

PROPERTIES

Gas. Extremely flammable.

EMERGENCY



FIRST AID

SKIN:

Wash with soap

For cold burns, immerse in cold water. Wash with soap & water, apply dressing.

FIRE FIGHTING:

Keep containers cool.

Water spray/ fog.

SPILLS AND DISPOSAL:

Eliminate ignition sources.

Consider evacuation.

Prevent from entering drains.

Contain spillage by any means.

PRECAUTIONS FOR USE



GLASSES:

Consider full face-shield.

RESPIRATOR:

Type AX Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

STORAGE AND TRANSPORTATION:

Store in cool, dry, protected area.

FIRE/EXPLOSION HAZARD:

HIGHLY FLAMMABLE.

Vapours/gas heavier than air.

Toxic smoke/fumes in a fire.

Risk of explosion if heated under confinement.

HEALTH HAZARD INFORMATION

ACUTE HEALTH EFFECTS:

CHRONIC HEALTH EFFECTS:

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS

Explosive
XToxic
XRadioactive
XOxidizing
X

X: Must not be stored together

SAFETY DATA SHEET



MTBE (methyl- tert-butyl-ether)

Section 1. Identification

GHS product identifier : MTBE (methyl- tert-butyl-ether)
Product type : Liquid.
Supplier/Manufacturer : SABIC Petrochemicals B.V.
Europaboulevard 1, Sittard
P.O. Box 5151, 6130 PD Sittard
The Netherlands
Emergency telephone number (with hours of operation) : +1-760-476-3961 (24h)
SABIC Access Code: 333619

Section 2. Hazards identification

Classification of the substance or mixture : ☒ FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 5
SKIN CORROSION/IRRITATION - Category 2
ASPIRATION HAZARD - Category 2

GHS label elements

Signal word : Danger

Hazard statements : ☒ Highly flammable liquid and vapor.
May be harmful if swallowed.
Causes skin irritation.
May be harmful if swallowed and enters airways.

Precautionary statements

Prevention : Wear protective gloves: > 8 hours (breakthrough time): nitrile rubber (> 0.38 mm); 4 - 8 hours (breakthrough time): polyvinyl alcohol (PVA).. Wear eye or face protection: Recommended: safety glasses with side-shields. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Wash hands thoroughly after handling.

Response : ☒ SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention.

Storage : ☒ Store locked up. Store in a well-ventilated place. Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Symbol



Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Substance
Other means of identification : Not available.
CAS number/other identifiers
CAS number : 1634-04-4
EC number : 216-653-1

Ingredient name	%	CAS number
tert-butyl methyl ether	98 - 100	1634-04-4

Section 8 - General Policy

Initial Actions In An Emergency

Raise The Alarm

Personnel on the vessel concerned shall signal an emergency by a continuous sounding of either long or short blasts on the ship's siren or whistle, or other emergency signal if the whistle is disabled or by other means if the vessel is beyond hearing range.

The Master is responsible for taking all immediate steps to safeguard his vessel.

Inform Terminal Operator

Report the emergency to the responsible terminal operator on the jetty or as quickly as possible and the Pilot assigned to the vessel, if he is on board.

Inform King Fahad Industrial Port Control Center

Call and inform "King Fahad Industrial Port Control" on VHF Channel (16 or 11)

Give a short message stating:

- Name of ship
- Type of emergency
- Location of ship
- Location of emergency on the ship
- Whether any casualties have occurred or are likely to occur.
- a. State what immediate assistance is required, indicating any loss of ship borne disaster-fighting capability.

In Case of Fire Or Explosion

In the case of fire or explosion and as soon as possible after raising the alarm, a message should be sent giving details of :

- What is on fire, the extent and possible dangers?
- Damage, extent, effect on stability and

seaworthiness.

- Injuries, men requiring removal, type of injuries, men missing and men overboard.
- Cargo type, quantity and loading status of each cargo tank on the ship.
- Oil spillage or if any danger of oil spillage exists.

Frequent Progress Reports

The Master should ensure that regular and frequent reports on the progress of the incident are being made to the RSM.

Emergency Shutdown of Cargo

To carry out an emergency shutdown of cargo loading, follow the instructions given in the document entitled "Emergency Shutdown"

The number of the appropriate berth will be agreed upon by signing the "Instructions to Masters& Conditions of use of Port" form when presented.

Prepare To Move From Berth

To the extent possible, the ship's Master should prepare his ship to be moved away from the berth.

All cargo, De-ballasting, operations will be immediately suspended; ship/ shore arms will be disconnected.

Removal From Berth

A burning vessel will not normally be permitted to remain at the berth.

Where possible, the fire will be fought with available berth fire-fighting facilities until the arrival of tugs. After securing tugs to the vessel's emergency towing wires then, if the fire is not controllable or extinguished, the vessel will be released or cut free and removed from the berth

under controlled conditions.

Provided communication is established as above, the Master will be advised of the actions to be taken in releasing or cutting the vessel free from the berth.

Notwithstanding that the vessel may have no power and notwithstanding that there may be no communication, if, in the opinion of the RSM, the burning vessel is a greater hazard at the berth than drifting free, the vessel will be released or cut free from the berth prior to the arrival and securing of tugs to the vessel's fire wires.

Ships Shall Not Be Moved Without Authority

Ships shall not get underway or be moved without the approval of the RSM or his deputy, except when an imminent threat to a ship, its personnel or Yasref facilities exists and the RSM or his deputy cannot be contacted in a timely manner.

Resuming Operations

If the vessel is still at berth when the emergency condition has been controlled and eliminated, normal operations will not be resumed without the specific approval of the RSM. Such approval may be subject to conditions.

Delay At Berth Charges

If, as the result of a vessel emergency, pollution incident, or other casualty causing damage to Yasref property, a vessel's loading is interrupted and delayed for any period of time, or if, upon completion of loading, the vessel is further delayed at berth due to such causes, the cost of such delay at berth shall be for the account of the vessel and its owners, operators, charterers and agents.

If a delay at berth is caused by a vessel

casualty, or other factor which prevents the vessel from continuing loading operations, or otherwise delays its departure from the berth upon completion of loading, and such casualty or other factor has not resulted in pollution or damage to Yasref property, at the sole discretion of Yasref the vessel will be granted a grace period of two (2) hours from the time of the casualty or event giving rise to the delay, after which time the costs of delays at berth shall be charged to the vessel. Delays caused by human error or negligence on the part of the crew will be charged to the vessels account for the full duration of the delay or interruption. The Master may be served with a Letter of Protest and master requested to provide a Statement of Facts concerning the incident.

Pollution Policy And Actions General Policy

Yasref adopts a vigorous "Clean Seas" policy that incorporates the detection, investigation and cleanup of all pollution and in particular, oil pollution, from whatever source. This is required and is fully supported by the Saudi Arabian Government.

It should be noted that the Red Sea areas are environmentally sensitive and are recognized to be Special Areas by MARPOL 73/78.

Vessels using terminals operated by Yasref are required to observe the MARPOL 73/78 conventions relating to the pollution of the sea by oil and to exercise every precaution to prevent such pollution.

These rules shall apply to all such vessels whenever they shall have arrived within the designated port limits. Furthermore, for the purpose of MARPOL 73/78, it is deemed that the vessel ceases to be in route at this time.

Definitions

For the purpose of these regulations, the terms “Clean Ballast” and “Segregated Ballast” shall have the same meanings as are defined in MARPOL 73/78 Annex 1.

General Rules

1. Any discharge into the sea of oil or oily mixtures is strictly prohibited with the single exception that, where ballast water reception facilities are not available, clean or segregated ballast water which has an oil content not exceeding 15 parts per million may be so discharged.
2. No discharge into the sea shall contain chemicals or other substances, which are hazardous to the marine environment. This specifically includes oil dispersants and allied chemicals.
3. No domestic or other garbage shall be dumped into the sea.
4. Excessive smoke from the funnels or exhaust gas lines of vessels is prohibited.

Mechanical Monitoring of Ballast Discharge

All vessels required by MARPOL 73/78 regulations to be fitted with Oil Discharge Monitoring equipment (ODME) shall present that equipment in good working order. Whenever clean ballast is being discharged, ODME monitoring equipment shall be set to continuously record the discharge oil content, in parts per million, which shall, at any instant, be identifiable by time and date. Clean ballast discharge water having an oil content exceeding 15-ppm shall be retained on board. Segregated ballast may be discharged, without mechanical monitoring, to any sounding provided that the discharge does not exceed 15 ppm of oil content. A visible sheen will be presumed to

indicate contamination and oil content in excess of 15 ppm. Should the ODME alarm sound while discharging clean ballast and a visual inspection of the ballast discharge reveal no visible trace of oil, the Master may be permitted to continue de-ballasting but only after consultation with and with the permission of the Chief Harbor Pilot. Masters should be aware, however, that a decision to permit continuation of de-ballasting is not automatic, that it will require careful consideration and may, therefore, result in delays. In such a situation, continuation of de-ballasting shall in no event be permitted at night. Vessels unable to continuously monitor the oil content of their clean ballast discharge shall retain a sounding of 1 meter in each clean ballast tank. Clean ballast shall be discharged during daylight hours only with a stand by marine craft in attendance during the ballast discharge period. In this regard, Masters will be required to give a pre-de-ballasting written statement of the quantity of clean ballast to be retained on board. This quantity will be checked on completion of loading. The charges for the stand by marine craft will be to vessel's account.

Visual Monitoring of Ballast Discharge

In addition to the use of oil discharge monitors, visual observance of the ballast discharge is mandatory. In this regard:

- All ballast discharge shall be via the high overboard discharge line if fitted. Vessels not so fitted may instead use their normal discharge line provided that the surface of the ballast water has been examined immediately prior to the discharge to ensure that no contamination with oil has taken place. This rule applies to all ballast. For vessels whose ballast tanks are inerted, the examination maybe by visual inspection of a sample drawn from each tank.
- DE-Ballasting by gravity is not permitted

under any circumstances.

- This inspection shall be carried out jointly by the vessel's Cargo Officer and Loading Master.
- A Crewmember shall be stationed on deck to sight the overboard discharge. Particular vigilance shall be exercised at any time that a change in operation takes place, e.g. starting of stripping pumps or educator, change of tanks, commencement of loading etc.
- At night, the ballast discharge and the sea area in the vicinity shall be adequately illuminated.
- **At pier berths, all ballast shall, if physically possible, be discharged from the off shore side of the ship.**

Reporting Oil Spills

As soon as the Master becomes aware of oil spill or oil pollution, he shall notify the Terminal Representative, KING FAHAD INDUSTRIAL PORT Control. Masters of vessels causing a pollution incident shall immediately make the necessary arrangements to notify the concerned government agency as per MARPOL 73/78. Normally, however, the ship's agent can arrange the necessary Government contact.

Investigations

Because Yasref must determine the source of a leak or spill and ensure that it has been secured with no further possibility of a spill from the same source, a thorough investigation will be initiated for any pollution whatsoever, no matter how minor. The investigation will include the taking of samples for analysis, both from the polluted sea and, if necessary, from all vessels in the vicinity to positively identify the source of the pollution.

If it is not possible, within one hour of discovery,

to determine and/or secure the source of the spill, the vessel will be removed from berth pending further investigation. During this time Yasref will carry out, concurrently so far as possible, a thorough inspection of its facility (the berth) and, with cooperation by the Master, crew and agent, the vessel.

If the Yasref facility is the source of the pollution, the vessel will be re-berthed at Yasref expense and as soon as possible to complete operations. If the facility is not the source of the spill, the vessel will be presumed to be the source unless investigation conclusively proves otherwise. Vessels will not be re-berthed until Yasref is satisfied that the source of the spill has been identified and secured.

An investigation of the ship may require that ullages or soundings be taken of all tanks. Samples may be drawn from ballast tanks, ballast lines, ballast pumps, sea chests and from the sea. The samples so obtained will be analyzed to determine whether the samples from the sea match the samples from the ship. In order to avoid delays, Masters are urged to contact their agents early to obtain a diving inspection should they suspect a hull leak or other fault requiring investigation by divers.

Masters who elect to discharge their contaminated ballast outside the geographical boundaries of Yasref Terminals shall do so in accordance with all applicable Saudi Arab Government and other local government rules and regulations and all applicable international treaties and conventions. Should a Master elect to depart a Yasref terminal to discharge contaminated ballast prior to loading, upon the vessel's return the Master may be requested to produce documentary evidence for forwarding to local Saudi Arab Government authorities, indicating the location, date, time and amount of such discharge.

Section 9 - Communications & Message

Notifications of Arrival

Initial Notification

A message must be sent to Yasref via E-MAIL as soon as a vessel receives orders to proceed to Yasref terminal. The message should give the name of the vessel and the estimated arrival time at the appropriate port.

Subsequent Updates To Estimated Arrival Time

Masters are required to send a minimum of three more messages to update the ETA about 72 hours, 48 hours and 24 hours prior to arrival. Failure to give at least 24 hours' notice will result in an addition to allowable lay time. Shorter notices may result in a berthing delay.

If loading or discharging at other nearby ports prevents a vessel from furnishing a reasonably accurate estimate of arrival time, steps should be taken to so advise Yasref (either directly or through the Ship's Agent) giving the best possible estimate.

A further message, giving an updated ETA should be sent immediately upon departure for the Yasref terminal.

The Standard Messages

Upon contact with all inbound tankers will transmit a standard message requiring a formatted reply for automatic processing.

Message reads:

KINGDOM OF SAUDI ARABIA
Yanbu Aramco Sinopec Refinery
Standard Telex



* ☒ YASREF CARGO ☐ SAUDI ARAMCO CARGO

ETA MESSAGE

1. Terminal: *

2. Subject: 3. Agent: *

4. Estimated Time of Arrival:

Date * Time * ETA time format should be HH:MM (ex. 07:35).

5. Message Date and Time:

Date * Time * Message time format should be HH:MM (ex. 07:35).

TELEX DETAILS

6. Ship Name: * 7. IMO Number: *

8. Ship Flag: * 9. Master's eMail: *

10. Ship Master Name: * 11. Operation: * ☐ Loading ☐ Discharging

12. Cargo Destination: *

13. Max Load Rate (1000 Barrels/Hr/Manifold) - Only for Tankers:

14. Load While de-ballasting Rate (Barrels/Hr):

15. Deballast Time (Hrs):

CARGO DETAILS: *

Cargo	QTY(1000 BBLs) M.T(for Solids)	Load rate (1000 BBLs/hr)	Load order	Blended Ashore	Destination

16. Oxygen content in Cargo Tanks(%):

17. State any special conditions or difficulties or defective equipment or gear which could present special hazards or difficulties when mooring or unmooring or during cargo operations:

TELEX DETAILS Cont.

18. a. Are LPG tanks sufficiently cooled for normal loading:

b. Are cargo tanks Inerted:

c. Are cargo tanks gas free:

d. Are cargo tanks have positive pressure:

e. State H₂S content in the cargo tanks (Parts per Million):

f. Coolant Required:

g. Time required for cooling tanks (hours):

19. a. Can multiple cargo grades be loaded simultaneously:

b. List available cargo manifold connections in sizes (inches):

20. a. Quantity of part cargo to be commingled with nominated cargo (barrels):

b. Part cargo type:

c. Quantity of residues or slops to be commingled with nominated cargo:

21. Does the vessel have valid flag state ISSC indicating compliance with the ISPS

code requirement: *

22. ISSC Expiry Date: *

23. Security Level: *

24. Is there any Epidemic disease or Illness on board? *

25. Are all crew international certificates of Immunization valid? *

26. Last Dry Dock Date: *

Note: If the vessel is new, please mention (NEW VESSEL), if not please mention the Date MM/DD/YYYY.

27. Is Early Departure Procedure for Cargo Documentation required?

28. Are there any Major structural changes to the ship tanks which mandated

re-strapping of tanks?

29. List of last ten port visits: * If previous visits are NOT available, please enter N/A.

No.	Port	No.	Port
1	N/A	6	N/A
2	N/A	7	N/A
3	N/A	8	N/A
4	N/A	9	N/A
5	N/A	10	N/A

Clear

Submit

Automating The Standard Messages

The introduction of automatic processing means that vessels no longer need to send lengthy and wordy messages in reply to the

standard message. Instead, only the answers

to each question are required according to the standard message format presented.

Maintaining Contact After Departure

It is important that all vessels operating under early departure procedure copy of traffic list after departure until cargo quantities are resolved and the agent authorized to sign cargo documents.

Ship/Shore Agreements

All ships must send completed Ship/Shore Agreements to designated email through their agent before arrival. + Agreements forms (Liquid and Solid).

Section 10 - Documentary Procedure

General.

All contact between ships and the Saudi Arabian Government and officials are to be made through the ship's agent who will advise on specific documentation and other requirements.

Notice of Readiness.

Notice of Readiness (N.O.R.) should be addressed to Yasref terminal via email

Tendering

For vessels required tendering N.O.R. by E-MAIL, this should be sent through the agents/ vessel master.

The written N.O.R. should be submitted to Yasref through the vessel's master, when he boards the vessel for inward clearance procedures. Any variations to this procedure are specified in the sections on individual terminals.

Any delay in tendering N.O.R. to Yasref may result in berthing delays that will be for the vessel's account. (An additional NOR is not required when loading patterns or conditions require that the vessel be shifted to another berth within the terminal.)

Tendering Time

The N.O.R. tendering time for any Yasref terminal shall not be earlier than the vessel's arrival time within port limits. If the vessel berths on arrival, the N.O.R. time shall be the pilot boarding time.

Acceptance Time

The N.O.R. will not be accepted until Terminal sending the pilot request.

Loading Documents.

The following documents must be completed for all vessels loading at terminal of Yasref. The information on the form will be used by Yasref to determine whether the difference between ship and shore figures, after loading, is within an allowable tolerance. Failure to complete the forms in the manner required may result in erroneous comparisons which could delay the release of the vessel.

Cargo Loading Plan

This form is completed, prior to loading, by the terminal representative and the vessel's Cargo officer. The Master or his representative will sign the document to verify its accuracy. The document includes Yasref cargo nomination grades and quantities, vessels requested quantities, vessels requested rates, and loading sequence, previous cargo identification and the vessels expected sailing draft.

Ship's Ullages Prior To Loading

This form must be completed by the Cargo officer and submitted to Yasref prior to loading. Loading will not start until the form has been received. Ullages, temperatures, free water levels, and grade (where appropriate) must be recorded for ALL of the vessel's tanks on individual basis. The average temperature and Total Observed Volume (TOV) of OBQ (on board quantity including oil and water) shall be recorded in U.S. barrels. The arrival draft and trim must also be recorded. If the vessel is carrying part cargo as a portion of its OBQ, the ship and shore Gross Standard Volumes (GSV) @ 60° F must be recorded for every grade of the part cargo. Further, the volume correction

tables used to calculate the part cargo must also be identified for both ship and shore.

Ships Ullages After Loading

This form must be completed by the Cargo Officer and submitted to Yasref on completion of loading. Ullages, temperatures, free water levels, and grade (where appropriate) must be recorded for ALL of the vessel's tanks on an individual basis. The sailing draft, trim and list corrections used in cargo calculations must also be recorded. The loaded volume must be calculated by subtracting the vessel's gross observed volume before loading from the Gross Observed Volume after loading. Do not apply a temperature correction factor to the observed volume of oil. Do not apply an experience factor. Report the average temperature of the oil for each grade in Fahrenheit. The average temperature and loaded volume for all grades must be reported to Yasref on completion of loading. The ship will not be released until these figures are received.

Early Departure

Use of this special service is encouraged and should be requested at the earliest opportunity. Close coordination with the agent is required in order to expedite the delivery of the required documentation to the ship.

Cargo Figures By E-Mail

It is essential that E-MAIL contact with Yasref be maintained after departure until cargo quantities are received and the agent has been authorized to sign documents.

Departure Documents

The following three documents **MUST** be on board before the vessel departs even though the ship has been released to sail by Yasref:

Port Clearance (Sailing Report)

This is the Outward Clearance but is titled Sailing Report. It is completed in Arabic with information gathered by the agent and is delivered to the vessel by the agent prior to departure.

Permit of Departure

The agent completes this document with information supplied in the quarantine e-mail message and delivered by him to the vessel prior to departure.

Early Departure.

Completed by Yasref except for the cargo quantities. The agent will deliver a copy to the Master who will enter the quantities as advised by e-mail after departure. The Master will then authorize his agent to sign the original Document on his behalf.

Early Departure Not Accepted

Where the Master elects not to take advantage of the early departure procedure, a wait of several hours at anchor for the bills of lading will be required. The bills will be completed by Yasref after which the agent will deliver the appropriate bills to the Master for signature.

Notification of Deficiencies

It is the responsibility of the Master to notify the KING FAHAD PORT CONTROL of any special conditions, difficulties or peculiarities present in the vessel, such as engine or boiler deficiencies, defective navigational equipment, mooring lines, tackle gear or lack of necessary equipment, which may impose hazards in connection with the handling, mooring, unmooring, loading or discharging of the vessel.

The master must provide this information to the harbor pilot, in writing on the master/pilot information sheet, before the harbor pilot begins

to provide Pilotage services.

Non-compliance with the requirements of this section will result in the vessel being denied berthing or removed from the berth and the Master/Owner/Charterer/Agent shall become liable for the berthing and unbreathing costs.

Vessels Denied Berthing

If a vessel is denied berthing due to a vessel-related problem, Yasref will charge for the subsequent service of berthing the vessel.

Vessels Removed From Berth

If a vessel is removed from the berth due to a vessel-related problem or cargo readiness, Yasref will charge for the subsequent additional services of berthing and unbreathing the vessel / responsible party.

NOTE: *'Vessel related problems' may include equipment deficiencies, safety deficiencies, pollution and / or other factors.*

Section 11 - Mooring Rules

MOORING REQUIREMENT

The minimum mooring line requirement and principles of mooring restraint for tankers are derived from the “Guidelines and Recommendations for the Safe Mooring of large Ships at Piers and Sea Islands” (OCIMF- 1992). These minimum requirements apply within the normal operating environment at Yasref Marine Terminals.

Yasref, however, accepts no responsibility for any consequence whatsoever resulting directly or indirectly from compliance with these requirements.

Notwithstanding anything contained in these Rules, it shall be the responsibility of the Master and Crew to ensure that the mooring arrangement is adequate in all respects to maintain the tanker in the berthing position during cargo handling operations. Further, the vessel shall be moored to the entire satisfaction of the Harbor Pilot.

The mooring configuration shall not be changed without permission of the Harbor Pilot except in an emergency.

Minimum Breaking Loads

All of the mooring lines used to secure the tanker shall be of adequate size and Minimum Breaking Load (MBL) for the tonnage of such tanker, constantly monitored and carefully tended throughout.

Condition of Equipment

All of the mooring lines, mooring winches, roller fairleads, and other mooring and towage equipment with which the tanker is provided shall be in good condition and properly maintained. Mooring line eye splices shall be in accordance with the Manufacturer’s

recommendations. Visibly damaged or badly deteriorated mooring lines will not be accepted for inclusion in the minimum lines to be provided by these rules and should be repaired or replaced prior to arrival.

Reporting Defects And Deficiencies

Any defect or deficiency in the mooring and towage equipment with which the tanker is equipped shall be reported to Yasref prior to arrival.

Additional Moorings

The Master shall accept guidance and provide mooring lines additional to the minimum requirements whenever so advised by the Terminal Representatives.

Mixed Moorings

Wire ropes and fiber ropes should not be used together in the same direction (i.e. breasts, springs, head or stern) because of the difference in their elastic properties.

Mooring Winches

Subject only to the suitability of fairleads and chocks, every tanker shall utilize all mooring lines mounted on independent mooring winches. All mooring winches shall be ready, at all times, for immediate use with the mooring lines correctly reeled on the winch drums. When the tanker is secured, the use of any mooring winch in an Automatic Self-tensioning mode is strictly prohibited.

Any synthetic mooring line used that is not mounted on an independent mooring winch, may be turned up on a mooring winch drum-end and backed up on a set of mooring bitts if practicable. The mooring winch brake must

be set whenever the winch is left unattended. When not in use, mooring winches must have their brakes set to hold a load equal to about sixty percent of the mooring line MBL.

High Elasticity Mooring Lines

High elasticity mooring lines are defined as those constructed of materials in which the elongation under load exceeds three percent “3%” at fifty five percent’s “55%” of the MBL. Subject to Yasref approval, High elasticity mooring lines may be used in addition to the required mooring wires in accordance with vessel’s tonnage. Subject to Yasref approval vessels may use mooring lines constructed of High-Modulus Synthetic Fiber, provided that they are in all respects fully compliant with OCIMF guidelines, as published in “Guidelines on the Use of High-Modulus Synthetic Fiber Ropes as Mooring Lines on Large Tankers” 1st, edition 2002.

Synthetic material mooring lines with a high elasticity should be avoided. Berthing and loading delays, chargeable to the ship’s account, may be encountered when this type of mooring line is provided. Rope tails of high elasticity synthetic material may be used in conjunction with wire mooring lines, provided that every wire mooring line used as head, stern, breast and spring line is similarly equipped. Plaited or braided construction is recommended for tails and the size of rope (diameter) should be capable of easy handling. When used, tails shall be in good condition, of equal length, not exceeding eleven meters and the MBL shall be at least twenty-five percent greater than that of the wire to which it is connected. It is recommended that both eyes of each tail should be effectively served with leather or other suitable material to prevent chaffing, and one eye connected to the mooring wire by means of an adequate shackle designed for the purpose,

such as a Mandel or Tonsberg Shackle.

Mooring Arrangements

Tankers other than small coastal tankers of 5000 tones deadweight or less shall provide a minimum of twelve mooring lines to affect the following mooring plan:

FORWARD	AFT
Head lines 2	Stern lines 2
Breast lines 2	Breast lines 2
Back springs 2	Back springs 2

Coastal tankers of 5000 tons deadweight or less, shall be moored to the Pilot and Master’s discretion.

Wire Moorings.

The following minimum wire mooring line requirements are mandatory for all tankers over 75,000 tons deadweight, berthing at Yasref Port.

VESSEL’S SIZE TONNES KDWT	MINIMUM WIRES REQUIRED	NO of WIRES RECOMMEND- ED
160 – 75	8	12
250 – 161	10	12
300 – 251	12	14
350 – 301	12	16
and above - 351	14	16

All the mooring wires on board shall be used.

Recommended Construction of Wire Moorings

For mooring VLCCs, it is recommended that a minimum construction for wire moorings should be as follows.

42mm diameter, 6 x 37 class IWRC, pre-formed, heavily drawn galvanized wire line (minimum tensile strength of 180 kg/mm²) with a typical MBL of 115 tons.

Tending The Moorings

An efficient watch must be maintained on the vessel's moorings at all times to ensure that all lines have the required tension and that the vessel is kept close alongside. Alongside piers or quays, keeping all mooring lines taut should prevent ranging of the ship. Attention should be given to the movement of the ship caused by wind, currents, tides or passing ships and the operation in progress. Vessels that move out of position will be charged for all expenses associated with re-positioning.

Anchors

Masters must be aware of areas of underwater oil pipelines and other submerged installations. On completion of mooring the anchors shall be effectively secured in the hawse-pipes to prevent accidental use at berth.

Use of Engine At Berth

The engine should, where possible, be run astern at 8 to 10 RPM continuously while at berth.

Where continuous running astern is not possible, the following conditions apply...

1. Tanker engines should be placed on "standby" in the event of emergency requirements.
2. The tanker's propeller should never be turned while the tanker is secured to the terminal without the approval of the Mooring
3. Master, except in emergency.
4. On occasions, particularly during calm weather, it may be necessary to put the engines dead slow astern in order to prevent the tanker from riding up to the terminal. Alternatively, tugs may be used.

Manifold Watchman

At all times, when at berth and when cargo loading arms are connected, there shall be a

watchman on duty at the manifold. He shall observe the configuration of the loading arms and the manifold connections. He shall be alert to oil leaks or spills, stress or chafing on the loading arms or ancillary equipment and deteriorating weather conditions. He shall report any abnormality or deteriorating weather to the Deck officer on duty.

The Deck Officer On Duty

The Deck officer shall immediately report any abnormal events, deteriorating weather or other situations coming to his attention to the Pilot/Control Room.

Gangways

Shore Gangway will be used, if any failure, vessel Gangway will be used, Gangway to be rigged and ready on the starboard side of the vessel, maintained at deck level.

Boarding Vessels At Berth

Small craft are not allowed in the vicinity of the vessel and no one is permitted to board or leave a vessel while cargo operations are in progress. Should it become urgent for personnel to board or leave a vessel for any reason during the cargo operation, the Pilot must be contacted to request permission to shut down the cargo operation while the small craft is alongside.

Care of Berth Equipment

In bad weather, maintenance work is extremely difficult and involves possible danger to personnel.

For this reason, vessels are requested to give as much assistance as possible by taking seaman-like care of the mooring and berth equipment and returning it to the water ready for the next tanker and in such condition as they would like to find it. Loading arms

maintenance is expensive and if Yasref judges that a vessel has misused any loading arms the vessel will be liable for the expenditure incurred in making repairs.

Disconnecting The Loading Arms

On completion of loading cargo, manifold valves must NOT be closed until the loading Master directs. This is important for line clearing.

1. Stop, take the weight and disconnect the flange.
2. Replace the blank flange using all the bolts and a new gasket. Tighten the bolts in sequence to avoid uneven tension on the flange.
3. Secure the loading arm.
4. Repeat for 2nd loading arm.
5. Return all Yasref tools and equipment to the steel basket, stow it in a seaman-like manner and prepare for lowering to the launch on either the port or starboard side dependent on weather conditions.

Cargo & Ballast Handling

Responsibilities & Procedures

The ship's cargo officer must directly and personally supervise all operations in connection with the starting of loading, discharging, switching of tanks and topping of tanks.

It is the responsibility of the vessel to advise Loading Master to shut down cargo when the vessel's cargo requirements. In this regard, the vessel shall give ten minutes advance warning.

Loading Rates

It is expected that most vessels will be able to accept any cargo as fast as it can be delivered. Officers in charge of loading must have due

regard for all safety precautions as well as for individual vessel hazards.

If loading of products is too slow, Yasref will so advise the vessel. Should such a vessel make a demurrage claim against Yasref, the slow loading rate will be considered in determining if a retroactive addition to allowable lay time is appropriate.

Liquefied Petroleum Gas Tankers

Special regulations govern the acceptance and loading of liquefied petroleum gas tankers.

Cargo Transfer

Good communications are of the utmost importance for safe cargo handling. A reliable communications system, including a secondary stand-by system, should be established and tested.

The loading/discharging plan, as well as the arrangements for emergency shutdown of cargo operations, should be reviewed and agreed between the Loading Master and the responsible Cargo Officer.

Cargo transfer operations should not commence until the ship's Cargo Officer on duty and the Loading Master are satisfied and have agreed that the cargo arms are correctly connected and that all necessary ship and onshore valves have been set for receiving or discharging cargo. Flow rate will be controlled from the land based pumping station (tanker loading) or the ship's pumps (tanker unloading). A joint ship-shore pumping and valve-closing regime should be established and maintained to avoid pressure surges.

Caution: *Rapid valve closure will cause pressure surges in the line which may cause damage to the system.*

Tanker Unloading

The Loading Master will instruct the shore facility personnel to open the shore valves.

The Loading Master will then instruct the ship's crew to open the tanker manifold valve(s) and the butterfly valve located at the end of the tanker manifold, if fitted. Once confirmation is received, the Loading Master will communicate with the Master or the ship's cargo officer to advise that the shore facility is ready and cargo transfer may begin once clearance is received.

Tanker Loading

The Loading Master will instruct the tanker crew personnel to open the manifold valves and the butterfly valves located at each end of the tanker manifold, if fitted.

The Loading Master will then instruct the shore facility personnel to open the shore valves. Once confirmation is received, the Master or the ship's cargo officer will communicate with the Loading Master to advise that tanker is ready and cargo transfer may begin once clearance is received.

Initial Pumping Rate & Checks

Pumping should proceed slowly at first until cargo is verified and recorded as being received. The entire system shall be verified as operating correctly. An inspection of the cargo system and surrounding water should be made during the first few minutes of cargo transfer to ensure there is no leakage.

Increasing To Maximum Rate

When it has been confirmed that the total system is operating correctly, the pumping rate can be increased to the maximum rate. Care must be taken not to exceed the rated working pressure for the terminal loading arm system.

Periodic Inspections

Throughout the cargo transfer operation, periodic inspections of the moorings, manifold connections, arms and the sea area around the ship and berth should be carried out.

Notice of Completion

Prior to completion of transfer, adequate notice must be given to the ship's cargo officer, who will communicate to the pump station to ensure that the valves and pumps are properly manned. Failure to observe these instructions could cause mistakes to be made, resulting in damage to the terminal and pollution.

Completion of Cargo Transfer Tanker Unloading

Upon completion of cargo transfer, it is essential that the shore valve(s) remain open until oil flow has ceased completely. The Loading Master must wait for confirmation from the tanker before directing that the shore valve(s) should be closed.

Tanker Loading

Upon completion of cargo transfer, it is essential that the tanker valve(s) remain open until oil flow has ceased completely. The Loading Master must wait for confirmation from the shore facility that the pumps are off before directing that the tanker manifold and hose end valves should be closed.

Warning: *Rapid closing of valves while the product is flowing will cause a pressure surge. When valves are to be closed they shall be closed slowly.*

(A) Rough Weather

Once the tanker is moored to the terminal, cargo transfer operations can normally continue in any weather condition within the maximum designed operating environmental conditions as long as the tankers are behaving in an acceptable manner and the environmental limits are not exceeded.

There are no wind restrictions for unberthing. The above limits are to be considered as guidelines only, and the final decision will rest with the pilot. Limiting conditions for the Pilot to board the vessel are wave height of 3 meters or wind over 30 knots. Limiting conditions for berthing and mooring operations are wind speed over 25 - 30 knots depending on berth assignment.

For berthing and unberthing purposes, wind, sea, and tidal conditions have to be within acceptable limits, so that during the final docking, the maximum berthing velocity and maximum approach angle are not exceeded.

- Maximum Berthing Velocity 20 m/sec
- Maximum Approaching Angle 7°

Suspend loading 30 knot,, Disconnect L/A 35 knot, De-berthing vessel 40 knot.

(B) Ballast Operations, Draft & Trim

Masters shall ensure that the vessel's propeller is submerged and that a stern trim of no more than 1.5% of the ship's length prevails throughout the de-ballasting and loading/discharge operations.

Vessels that are unable to comply with these requirements will not be accepted for berth.

Vessels already berthed that cannot comply, will be, at Yasref option, removed from berth for anchorage until such time as such requirements are met.

All costs associated with such unberthing and berthing shall be for the vessel's account.

All tankers should always commence ballast operations concurrently with cargo transfer operations.

For tankers that are unable to handle ballast concurrently with cargo, it may be necessary to suspend cargo discharge to take on ballast or to suspend ballast

Commencing The Deballast

De-ballasting shall not commence until the vessel is fully secured to the berth.

Thereafter, vessels must complete the de-ballasting operation as expeditiously as possible in order to minimize time at berth.

De-ballasting always should be offshore, in case de-ballasting onshore the letter of protest will be issued to vessel and vessel master must be providing statement of fact.

Poor De-ballasting Performance

If, in the opinion of Yasref terminal, a vessel which does not carry out cargo and ballast operations concurrently or requires a reduced loading or discharge rate while de-ballasting/ballasting, exceeds the de-ballasting time which Yasref considers normal, the Master will be so notified by a Protest Letter.

Section 12 - Forms & Documents

Examples of the various Marine forms and documents used by the Yasref terminal Management are given in the annex to this section. Each document and its purpose are briefly described hereunder.

Instructions To Masters And Conditions of Use of Port

This document requires the Master to acknowledge possession of the Yasref Terminals Book and to agree to all the terms and conditions of use of port as given in the book. Vessels will not be permitted to move to and from the berths until these conditions are agreed. This is, therefore, the first document the Master will be asked to sign. The form is signed by the Master in duplicate, the original for the Master and a copy for the Pilot.

Master / Pilot Information Sheet

This form is completed on every occasion that a vessel visits a Yasref Terminal. It makes reference to the “Vessel Static Data Information Sheet” below. It also requires information about the Oil Discharge Monitor, Venting system and smoking rooms.

Vessel Static Data Information Sheet

This form is completed only once. It is then placed in the vessel’s file for future reference. The Pilot retrieves a copy prior to boarding the vessel. This forms part of the Master ~ Pilot information. The Master is required to state on the ‘Master ~ Pilot Information Sheet’ if any of this data has changed since the last visit. If so, a new form must be completed.

Cargo/Bunker Request And Loading Plan

This form is completed after berthing and before

cargo loading begins.

SAFETY CHECK LIST

This checklist is a slightly modified form of the ISGOTT 6th edition, 2020 safety checklist, SOLAS ch. 12, BLU code, IMDG code and IMSBC code for bulk vessels.

Rules for completion are given on the front of the form..

Regulations For Loading Static Accumulator Oils

This is the form used when making calculations.

Ships Ullages - Instruction Sheet

This is the cover page of the ullage report form giving instructions for completing the data section.

Ships Ullages - Data Sheet

This is the data part of the ullage report form. It must be completed by ship’s Cargo Officer and returned, properly completed and signed, to the Shore Operator or Pilot as appropriate, as soon as possible after completing cargo. Delay in submission of the form means delay in comparison of ship / shore figures hence delay in release and subsequent delay in sailing.

Ship/Shore Difference Investigation Checklist

In general, Yasref expects that the cargo loaded figures calculated by the ship’s Cargo Officer will be within a tolerance of $\pm 0.2\%$ (MTBE $\pm 0.5\%$) of the figures calculated by Yasref. The tolerance may be increased to 0.7% in the case of new vessels or vessels that have been to dry-dock and which have had substantial tank work carried out.

Yasref keeps a record of the last five loadings and ship/shore differences for every vessel. The average difference is then applied to the ship's figure before the ship/shore comparison is made. Cargo officers must not, therefore, apply their own experience factor.

If the difference between the ship and shore calculations is outside of the allowable tolerance and a Re-check does not resolve the difference, a Yasref Cargo Inspector will, together with the ship's Cargo officer, re-survey the cargo until either the difference is resolved or the vessel is released to sail under protest.

The methods and procedures used by Yasref exactly follow the procedures required by the Ship/Shore Difference Investigation checklist. The Inspector will also complete new ullage forms and requests the Master or Cargo officer to witness and agree to the new figures by signature on both forms.

For ARAMCO cargos: New vessel $\pm 0.7\%$ and Regular vessels $\pm 0.3\%$.

Emergency Shut Down

A copy of this notice will be presented to the Master for posting in a conspicuous place in the Cargo Control Room.

Pollution Notice

When it is determined that a vessel has caused pollution, this form letter will be issued requiring the Master's signature for receipt. The original will be given to the Master; the copies are for Yasref.

Protest Letter

The standard Yasref Protest letter issued for any incident or deficiency which could result in loss, damage or delay or which contravenes any Yasref regulation or safety requirement.

This form will be issued in triplicate. The Master

signature is required for receipt. The form will be issued in triplicate. The original will be given to the Master. The copies are for Yasref.

Vessel master must provide statement of fact for each protest letter, in case vessel master refused providing the required statement, vessel will marked as deficient in Yasref vetting system.

Maximum Sailing Draft

This form is issued to Masters of vessels whose sailing draft should not exceed 16 meters for Berths 71, 72 & 15.2 meters for solid handling Berth # 69 and whose sailing time may therefore be restricted by tide height.

Smoking Notices

Two smoking place notices, of the type shown, will be supplied.

Advice To Masters Concerning Pollution

This form sets out the precautions and consequences of an oil spill determined to be caused by a ship.

Warning Against Restricting The Shore Rate

This form draws attention to the dangers, recommendations and requirements of restricting the shore flow rate. It is signed by the Ship's master.

NOTICE

1. This book is designed as a reference work for the purpose of acquainting Owners, Charterers, Masters of vessels and others with the general conditions, rules, regulations, facilities and available services at all Yasref Terminals.
2. This book does not replace or modify of ficial publications covering the waters, areas, hazards or other subjects to which it pertains, nor is it intended for such purposes.
3. The information contained herein is believed to be accurate. But Yasref makes no warranties and assumes no responsibilities regarding this book or any other information which may appear.
4. The rules prepared by Yasref concerning the safe handling of gas and oil tankers at the terminals, the vessel safety inspection check list, and forms of declaration and agreement between the Master of tankers and Yasref, are essentially based upon the recommendations on the Safe Transport, Handling and Storage of Dangerous Substances in Port Areas adopted by the Maritime Safety Committee of the International Maritime Organization (IMO) Codes for the Construction and Equipment of Ships carrying Oil products in Bulk.