Jazan Bulk Plant Terminal

Contents

1 Port Location & Description 3

1.1 Location of Terminal 3

1.2 Marine Terminal Assistance Fees 3

1.3 Description of Terminal 3

1.3.1 SPM buoy water Depth 3

1.2.2 Cargo Hoses 3

1.2.3 Cargo Hose Strings 4

1.2.4 SPM Marking 4

1.2.5 Cargo Hose connection 4

2 Entering the Terminal 4

2.1 Maximum Drafts 4

2.2 Ballast Condition 4

2.3 Vessels arriving 4

2.4 VHF Communications 5

2.5 Anchoring and Restricted Areas 5

3 Pilotage, Mooring Rules and Operations for SPM Buoys 5

3.1 Pilot Boarding 5

3.2 Helicopter Operations 6

3.3 Preparations Prior to Mooring 6

3.3.1 Preparing the Forecastle Head 7

3.3.2 Preparing the Port Side Manifold 7

3.3.3 OCIMF Standard Manifold Arrangement 7

3.3.4 Equipment Transfer 7

3.4 Mooring Sequence of Operations 8

3.4.1 Mooring / Line Boats 8

3.4.2 Operational Limits 8

3.4.3 Optimum Approach Direction 8
3.4.4 Approaching the SPM 8
3.4.5 Mooring Hawser Hookup 9
3.5 Connecting the Hoses 9
3.6 Use of Tug/Engine at Berth 10
3.7 Bow Watchman 10
3.8 Manifold Watchman 10
3.9 The Deck Officer on Duty 11
3.10 Gangways 11
3.11 Boarding Vessels at Berth 11
3.12 Care of Berth Equipment 11
3.13 Disconnecting the Hoses 11
3.14 Unmooring Procedure 12
4 Berth Information 12
4.1 Procedure at Berth 12
4.1.1 Cargo and Ballast Operations 12
4.2 VHF Communications Failure 12
5 Completion and Departure 13
5.1 Cargo calculations on arrival and departure 13
5.2 Departure 13
6 Annex 13

Jazan Bulk Plant Terminal

RULES REGULATIONS AND GENERAL INFORMATION

1 Port Location & Description

1.1 Location of Terminal

The Saudi Aramco Jazan Bulk Plant Terminal comes within the Jazan Port Authority boundary and is not owned or controlled by Saudi Aramco.

1.2 Marine Terminal Assistance Fees

The Owners, Operators and Charterers of any vessel calling at Jazan Bulk Plant Terminal shall be liable and shall reimburse Saudi Aramco promptly and in full for all applicable Jazan Bulk Plant Marine Terminal Assistance Fees.

1.3 Description of Terminal

The Saudi Aramco Jazan Bulk Plant, Marine Terminal comes within the Jazan City Port Authority boundary. Within the boundary Saudi Aramco has an exclusion zone around two (2) single point moorings (SPMs) for Tankers.

Each is a CALM SPM Buoy suitable for Tankers between 10,000 and 50,000 MT DWT. Information on suitable parameters for using the SPMs are listed in the Universal Berth Parameters including:

Max. L.O.A.: 220 meters

Max. Beam: 35 meters

Anchoring or fishing within the designated areas are prohibited without prior permission from Jazan Port Authority.

1.3.1 SPM buoy water Depth

SPM	Water Depth
1	17.70M
2	18.10M

1.2.2 Cargo Hoses

Each SPM is fitted with one 16” diameter floating cargo hoses and one 17” circumference, double braided nylon, 55.4 meters (180ft) long mooring hawser.

The tail end hose presented to the ship is 16” fitted with 16” flat face blank flange, a lifting eye, and lifting and snubbing lines.

Each hose weighs approx. 3.5MT and is designed for;

- Maximum throughput 18,000 BPH
- Normal operating pressure 11 Bar
- Design pressure 15 Bar

1.2.3 Cargo Hose Strings

The SPM #1 hose string is 256.0 M (840 ft.) long and SPM #2 hose string is 246.0 M (805 ft.) long

In the exceptional case of an SPM being taken out of service for maintenance or otherwise the cargo hose string may be transferred and connected to the other SPM. The result is an SPM connected with 2 hose strings to ensure flexibility and continuity of cargo operations.

1.2.4 SPM Marking

The SPM buoys are fitted with radar reflectors and navigation lights.

The navigation lights switch on automatically during hours of darkness.

Light character 2 FL +1LFL 15-sec. Range 8 NM.

1.2.5 Cargo Hose connection

Cargo hose connections will be carried out by the ship's crew and supervised by the terminal representative.

2 Entering the Terminal

2.1 Maximum Drafts

Under normal operating conditions the maximum arrival draft is 11.80M, and a positive (+) height of tide above Lowest Astronomical Tide (LAT).

2.2 Ballast Condition

Under normal operating conditions all vessels should comply with the "Common Rules and Information" Section 11.2 Ballast Operations Draft and Trim.

2.3 Vessels arriving

For vessels proceeding to a Jazan Bulk Plant SPM berth and maneuvering from either the channel or from the anchorage, the Harbor Pilot will board close to Tanker Anchorage (B).

2.4 VHF Communications

Jazan Bulk Plant Terminal maintains a listening watch on VHF channel 11, which is used as the calling channel to confirm as required vessel berthing or anchoring.

Prior to berthing the Saudi Aramco Harbor Pilot will contact the vessel on VHF channel 11 & 16.

Vessels on SPM must maintain a listening watch on

- VHF channel 10 for SPM 1
- VHF channel 11 for SPM 2

And coordinate all operations with the onboard Saudi Aramco Harbor Pilot.

2.5 Anchoring and Restricted Areas

The Port of Jazan City is an open roadstead, protection is afforded by shoals and land to an extent where vessels do not normally experience heavy movement.

Jazan has (2) anchorage areas “A” and “B,” which are North and South of the Jazan entrance channel, respectively. Vessels bound for Jazan Bulk Plant terminals should use “B” anchorage, which is 3.5 miles (west-southwest) of Jazan Port entrance breakwater end.

Vessels directed to anchor prior to berthing should anchor in Jazan “B” Anchorage. Holding ground is good with depth of 12 to 20 meters.

There is a relatively shallow patch of ground to the north west of “B” Anchorage, with a charted depth of 11.9 meters.

Newly arrived tankers should avoid this patch when proceeding to the anchorage or the SPM. The position of the shallow patch is: Lat. 16. 52.30’N Long. 42. 26.95’E, and is approximately one (1) cable in circumference.

No vessel shall enter any restricted or prohibited area without a Pilot on board. Fishing vessels are prohibited from fishing and/or anchoring in these zones.

Under no circumstances shall anchors be used in these areas due to the existence of submerged pipelines.

3 Pilotage, Mooring Rules and Operations for SPM Buoys

3.1 Pilot Boarding

The Harbor Pilot and, if assigned, Harbor Pilot Assistant and/or Harbor Pilot Trainee, will board the tanker close to Tanker Anchorage B. The Master should provide an adequate lee for embarking the Pilot team if they are to board by boat, or orient and prepare his/her ship as requested by the helicopter dispatcher, if the team is to board by helicopter.

Pilot boat operations and boarding activities from a launch are limited by the following weather conditions: a wave height of 2 meters and/or wind speed of more than 25 knots.

Harbor Pilots will not attempt to berth vessels bound for or at the SPM unless it is safe for the mooring boat to operate in the prevailing weather conditions.

At all times mooring boats shall operate within their allowable design specifications after a careful evaluation of the existing circumstances and weather conditions, carried out by the Harbor Pilot.

The Pilot/Pilot Assistant, as applicable, will advise the Master on all maneuvers and operations relative to berthing, connecting and disconnecting hoses and unberthing. Moreover, they will also provide all communications between ship and shore during cargo loading and be the Saudi Aramco Representative with respect to safety observations and other requirements

3.2 Helicopter Operations

Helicopter operations are not carried out routinely at Jazan Port.

In the eventuality that a helicopter may be required as part of an emergency or other procedure, all vessels should be prepared for helicopter operations to be carried out according to the "International Chamber of Shipping (ICS) - Guide to Helicopter/Ship Operations."

All vessels should have a copy of this booklet and the safety checklist relevant to helicopter operations on board.

3.3 Preparations Prior to Mooring

Ships assigned to the SPM buoys must comply with the OCIMF recommendations for equipment employed at single point moorings.

During the approach, while mooring/securing to the SPM, the vessel's anchors must be secured by stoppers to prevent accidental dropping with subsequent damage to the subsea pipelines and equipment.

Line handling during mooring/unmooring shall be performed by the ship's staff under instructions of the Pilot/Pilot Assistant.

Ship cargo cranes shall be rigged and ready to lift the hose connecting equipment basket from the launch from either side. If available, a trolley may be required to transport this equipment about the vessel's deck.

The vessel shall have the following equipment ready for use on the forecastle head.

- Large crow bar.
- Large intrinsically safe flashlight for night mooring.
- A messenger line 24 to 28 mm diameter, 150 m in length.
- Winch drum or empty spool drum to heave onboard the mooring pick up rope.

Where possible, the mooring line(s) should lead through a Panama chock in the center of the bow, rather than through a single port or starboard bow fairlead to reduce the possibility of yawing.

Power should be available to the winches (mooring deck equipment) on the forecastle and to the cranes at the ship's manifold to ensure they are ready to lift the ancillary mooring and hose handling equipment. The manifolds shall be prepared for cargo operations, as detailed in 3.3.2.

The Pilot/Pilot Assistant will check that all equipment for mooring and hose connecting operations are on board the launch and in working order prior to departure. Items such as chain hoists, gaskets, wrenches, flange bolt sets, butterfly valve handles, ullaging equipment, sample bottles, etc., may be required and placed on board.

3.3.1 Preparing the Forecastle Head

Ship's staff will prepare the forecastle head for the mooring operation at the instruction of the Pilot/Pilot Assistant.

3.3.2 Preparing the Port Side Manifold

All Saudi Aramco SPM terminals have been designed for port manifold vessels only. The cargo crane must be currently certified, tested and ready for use.

Two 16" flange connections to be fitted on cargo manifolds.

To avoid delays, the vessel should have reducers ready at the port side manifold to adapt to any other size requests.

Drip trays, absorbent material or sand and firefighting equipment should be in position.

Saudi Aramco normally supplies the following, but their presence will prevent delays in case of deficiency or malfunction.

- Handy-Billy/Chain block
- Spare spanners
- Spare wire strops
- Spare bolts

3.3.3 OCIMF Standard Manifold Arrangement

To secure the hoses to the vessel's manifold the manifold arrangement must be as recommended in OCIMF publication "Recommendations for Oil and Chemical Tanker Manifolds and Associated Equipment."

3.3.4 Equipment Transfer

Saudi Aramco mooring and hose connecting equipment will be lifted aboard the tanker from the launch on either the port or starboard side, by means of the ship's crane.

Normally, the transfer of equipment will be done once the ship is fully secured to SPM. If the ship requires cargo reducers, the transfer will be done as soon after the Pilot boards the vessel as possible. For this purpose, the hose handling crane shall be ready for immediate use and an adequate lee shall be provided.

To prevent injury to personnel and damage to the launch superstructure, the hoisting block must be secured and controlled by a handling line during the entire transfer operation.

3.4 Mooring Sequence of Operations

3.4.1 Mooring / Line Boats

Jazan Bulk Plant Terminal normally operates with two tugs and a mooring boat. Both tugs are available for mooring assistance at the SPMs.

The launches and other terminal facilities are equipped with compatible VHF and UHF two-way radio equipment of adequate power.

3.4.2 Operational Limits

Harbor Pilots should not attempt to berth vessels at the SPM unless it is safe for the mooring boat to operate in the current conditions. The decision to proceed with the operation should only be made in agreement with the mooring boats.

At all times mooring boats shall operate within their allowable design specifications. The Harbor Pilot should complete a careful evaluation of the existing circumstances and weather conditions including consideration of the wind speed and direction, the state of the sea including the assessment of swell and currents.

3.4.3 Optimum Approach Direction

Prior to making the final approach to the SPM, it is important that the Master and the Pilot evaluate and agree, on all conditions and factors that will influence the mooring operation. These conditions and factors include: the tide, current, wind, swell and wave effect, and the direction in which the floating hose strings and hawsers are lying.

The optimum approach to the terminal is into the wind and sea. At times this approach will not be possible, because of the current being at variance with the wind or sea conditions. Accordingly, it is incumbent upon the Master to exercise careful judgment when approaching the terminal, particularly during the hours of darkness and in poor visibility.

Particular attention must be given to the location of the floating hose string. Normally, the position of the floating hoses will be controlled by the currents, rather than by wind effect.

3.4.4 Approaching the SPM

When the optimum approach route has been selected, the tanker should proceed toward the terminal at a suitable speed, dependent upon the conditions at that time. Approximately 1,000 m from the berth, the vessel should have only sufficient way on for steerage.

The floating hose string should be on the port side. The tanker should make the final approach with the buoy on the port bow, rather than dead ahead. This permits the Pilot/Pilot Assistant on the bridge to observe the buoy at all times, and in the event of any misjudgment of the approach speed, there is no danger of overrunning the buoy.

In general, the vessel will approach the SPM on a heading against the wind and/or current whichever takes dominance.

It is extremely dangerous for small boats to lie in the path of large vessels, particularly when the larger vessel has a bulbous bow. Therefore, the ship's crew must carry the messenger line to a safe location aft of the bow, along the flat side of the hull before lowering the messenger line, thereby making it unnecessary for the boat to position itself right ahead or under the flare of the vessels bow.

The tanker's approach speed must be reduced to a minimum, but sufficient to keep the ship's maneuverability.

A tugboat may be secured right astern throughout the ships approach to the SPM as deemed necessary by the Harbor Pilot.

3.4.5 Mooring Hawser Hookup

As the vessel approaches the berth, the floating hoses are towed away from the path of the approaching tanker. In addition, the angle between the cargo hose and the pick-up rope should not be allowed to extend more than 90° and in no case the cargo hose and pick-up rope be in opposite directions.

When the vessel is approximately 300 to 460 m (1,000 to 1,500ft) from the buoy, and still making way, the mooring boat will bring the port hawser pickup rope (80 mm diameter) and make it fast to the messenger. At the boat's signal, the pickup rope is heaved on deck.

Under no circumstances must any load be put on the pickup rope as this may lead to the failure of the rope.

The tanker should be brought to a dead stop between 45 and 60 m (150 and 200ft) from the buoy. At this point, the chafing chain is lifted into the bow chock and then to the bow chain stopper to be secured under the direction of the pilot. Ease back on the pickup rope until the weight is taken up.

Care must be taken to gradually transfer the load to the hawser, to avoid any shock loading that can result from a freely drifting tanker taking up hawser slack.

3.5 Connecting the Hoses

Connecting cargo hoses is to be carried out by the ship's staff under instruction and supervised by the terminal representative:

Due to possible vessel induced movement to the crane wire/hook, the vessel must use guide ropes to reduce/control the hook movement at all times during raising and lowering operations.

1. **Lower crane hook to the mooring boat, which will connect it first of all to the forward hose.**
2. **Heave up until the blank flange is level with the hose rail.**
3. **Unshackle hose snubbing lines from the flanges.**
4. **Continue heaving up the hose as directed by the Pilot Assistant.**

5. **Secure snubbing lines in a manner to facilitate possible slackening as directed.**
6. **Lower the hose to bring the hose flange to the manifold and check the alignment of the flanges.**
7. **Lower the hose onto the drip tray and removed the blank flange.**
8. **Lift the hose and connect it to the manifold. Never use a wire strop around cargo hoses.**
9. **If the ship is required to connect two cargo hoses then the second cargo hose is connected in the same way. It is important to use all of the bolt holes and a new gasket for every connection.**
10. **After all hoses are connected, they must be supported in way of the vessel's side rail, by means of nylon belly bands hooked up to ship's crane. Be advised that the hoses cannot touch the saddle rail at any time.**

3.6 Use of Tug/Engine at Berth

After securing chains, a tug will be made fast astern using a vessel's line of suitable length and strength for the whole period the vessel is at the SPM, and utilized as necessary to keep a safe distance from the SPM and reduce any unnecessary strain.

The utilization of the tug is important at all times and particularly important during times of changing sea conditions and adverse weather conditions.

Vessels that are only able to run their engines astern for short periods should maintain them in a state of readiness at short notice and use them as required to maintain position off the SPM. At such times, the Pilot may direct the operation from the forecastle with a vessel's officer and with the bridge manned by the Master.

3.7 Bow Watchman

At all times when at berth, there shall be an experienced crewmember on duty at the bow of the vessel. He shall be issued with a means of immediate communication with the Deck Officer on duty.

He shall observe the configuration of the hoses and mooring hawsers, and the proximity of the SPM and hoses to the tanker. He shall be alert to oil leaks or spills, unattached oil slicks in the vicinity and deteriorating weather conditions. He shall immediately report any abnormal event or deteriorating weather to the Deck Officer on duty.

3.8 Manifold Watchman

At all times, when at berth and when cargo hoses are connected, there shall be a watchman on duty at the manifold. He shall observe the configuration of the hoses and the manifold connections. He shall be alert to oil leaks or spills, stress or chafing on the hoses or ancillary equipment and deteriorating weather conditions. He shall report any abnormality to the Deck Officer on duty.

3.9 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 or Pilot Assistant on duty.

3.10 Gangways

The gangway is to be rigged and ready on the starboard side of the vessel, maintained at deck level.

3.11 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.

3.12 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 proper care of the mooring and hose equipment.

Saudi Aramco will hold the vessel responsible for all costs and/or losses resulting from damage to the mooring and hose equipment where they consider that the vessel has been negligent in taking proper care of them.

3.13 Disconnecting the Hoses

Disconnecting a single cargo hose or hoses is to be carried out by the ship's staff under instruction and supervised by the terminal representative:

Due to possible vessel induced movement to the crane wire/hook, the vessel must use guide ropes to reduce/control the hook movement at all times during raising and lowering operations.

1. Connect the hose strop and if two cargo hoses are connected the after-hose strop to the crane hook, take the weight and disconnect the flange.
2. Replace the blank flange using all the bolts and a new gasket. Tighten the bolts to avoid uneven tension on the flange.
3. Lower hose to deck and secure.
4. Repeat with forward hose, if two cargo hoses are connected.
5. Secure the crane hook to the lifting hook of the after hose and raise the hose until the weight is taken off the snubbing wires.
6. Release the snubbing wires, lower the hose to rail level and shackle the snubbing wires to the flanges.
7. Lower the hose end into the water and trip the hook to release.

8. Repeat for the forward hose if two cargo hoses are connected.

Return all Saudi Aramco tools and equipment to the steel basket, stow it in a seaman like manner, and prepare for lowering to the mooring boat on either the port or starboard side, dependent on weather conditions.

3.14 Unmooring Procedure

1. Take the weight of the chain and hawser on the pickup rope using the windlass.
2. Disconnect chafing chain from the bow chain stopper.
3. Slowly slack the pickup rope until the support buoy is in the water and taking all of the weight of the chain.
4. Pay out the pickup line either to the mooring boat or as the ship clears the berth.

4 Berth Information

The specific gravity of seawater at Jazan is approximately 1.025.

Cargo Rates

Will be set by the Harbor Pilot in coordination with the Terminal.

Each hose weighs approx. 3.5MT and is designed for:

- Maximum throughput 18,000 BPH
- Normal operating pressure 11 Bar
- Design pressure 15 Bar

Ballast and Slop Reception

Not available at the Jazan Bulk Plant Terminal.

4.1 Procedure at Berth

4.1.1 Cargo and Ballast Operations

Cargo rates will be set by the Harbor Pilot in coordination with the Terminal and as agreed with the vessel.

All cargo and ballast operations will be controlled by the ships' Officers.

Ballast and Slop Reception is not available at Jazan Refinery SPM Terminal.

Radio communications with the Terminal will be designated by the Pilot or Pilot Assistant. The need for emergency shutdown of discharging aboard the vessel must be communicated as soon as possible to the Harbor Pilot and Terminal.

4.2 VHF Communications Failure

In the event of failure of radio communication systems, the vessel will sound five long blasts on the vessel's whistle. Loading operations will be stopped and will not be resumed until communications have been restored.

5 Completion and Departure

5.1 Cargo calculations on arrival and departure

The Cargo Officer in coordination with the attending cargo surveyor and if necessary Harbor Pilot assistance, will supply the ship's cargo figures on arrival and prior to departure in U.S. (i.e., Gross) Barrels. The Terminal Representative will not accept the figures until they are presented in writing on the Saudi Aramco ullage report form.

Results of ship/shore comparison take time and Masters are urged to prioritize the cargo calculations and completion of the ullage report form to avoid delay.

If the vessel is released, the Harbor Pilot will leave after unmooring is completed and the ship is clear of the berth. If the ship/shore difference is large and the vessel is not released, the Cargo Officer in coordination with the attending cargo surveyor and if necessary, Harbor Pilot assistance, will survey any cargo to Saudi Aramco inspection procedures and report the findings to Saudi Aramco Terminal Planners.

Refer also to "Common Rules and Information," Section 11.3 "Cargo Calculations and Release."

5.2 Departure

Upon completion of unmooring, the vessel will make a lee for the mooring and hose connecting equipment to be discharged onto the launch, on either port or starboard side.

The Pilot/Pilot Assistant will normally leave by Pilot launch.

All vessels using the Jazan facilities should then proceed outwards via the departure North Channel.

6 Annex

Location Chart

Jazan SPM Berths