



SLAGEN REFINERY
2008
HARBOUR
PROCEDURES

**SLAGEN PORT RADIO
VHF CHANNEL 14 (HARBOUR)
UHF CHANNEL 5 (TERMINAL)**

**ExxonMobil
ESSO NORGE AS
SLAGEN REFINERY**

THE PORT OF SLAGEN

Norwegian Chart No. 3 and No. 481 (B.A. 3158)

Slagen Refinery is situated on the west bank of the Oslofjord about 5 n. mile south of Horten. The marine terminal consist of a pier about 500 m long with loading/discharging berths on both sides. To the south of the long pier there is a small harbour where mooring boats and oil recovery equipment are kept. The terminal and its near surroundings are owned and controlled by Esso Norge AS. It has its own Harbour Office with Marine Supervisors on duty 24 hours a day.

The pier is aligned North-South and the prevailing current is setting Southeasterly, but both direction and velocity can be highly variable. Velocity upto 1.4 knots have been measured. Under normal weather condition it is recommended to berth with the vessel's port side alongside.

After prolonged bad weather and storm in the North Sea and Skagerak, heavy swell may come into the harbour and in some cases all loading or discharging operations are suspended and the vessels taken off berth.

Masters are invited to contact Slagen Harbour Office, VHF channel 14, in order to get updated on wind, current and/or whatever question which may arise.

Foreign flag vessels should send ARRIVAL NOTIFICATION at least 24 hours prior to entering Norwegian territorial waters (NTW) and REPORTING POINT NOTIFICATION when crossing the Norwegian baseline upon entering and leaving NTW. The message should be sent to Norwegian Authorities through the nearest Norwegian Coast Radio Station.

Entering Norwegian waters and approaching local baseline ships should report to Oslofjorden VTS (Vessel Traffic Service) situated in Horten, and operating on VHF Channel 13 and/or 18.

For most foreign flag vessels pilotage is compulsory from Ferder to Slagen and vice versa. Vessels of 20 000 DWT or more will be piloted by choiced pilots especially trained for berthing vessels at the Slagen Marine Terminal.

Alongside berth UHF channel 5 is used for communication ship/shore (radio sets to be placed onboard).

The Slagen Marine Terminal has approximately 800 tanker calls a year with size variation 100 to 250 000 DWT. The annual import of Crude oil (mainly from the Northsea) and Blendstock is about 6.5 mill. m³ and about 5.7 mill. m³ petroleum products are shipped out.

Bunkers of any grades available ex wharf for vessels calling for loading and/or discharging. Also lubricating oils and grease, in bulk or drums, can be delivered. Order for such deliveries should be placed well in advance of the vessel's arrival.

Systems for handling of garbage, ballast and waste water or slops within terminal capacities in place.

Slagen, January 2008

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NOTE

This note gives important instructions for berthing and safety requirements during your stay in port.

Nothing in these regulations will relieve masters of their responsibilities in observing the normal navigational, fire prevention and security regulations.

The harbour regulations and information guide will be subject to adjustments without further notice.

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GENERAL

- A: These regulations must be strictly observed by all vessels within the Refinery Port Area. Should any situation arise that is not covered by the rules, the master and his crew shall act in such manner as to prevent or restrict harmful consequences as far as possible.
- B: Nothing in these regulations and/or security measures taken by Esso Norge AS in accordance with these regulations, shall relieve the vessel, master or its owners of responsibility, if direct or indirect, causing damage to Esso Norge AS's and/or third party property. The master or his responsible officer on duty shall make sure that the crew's understanding of these regulations are correct.
- C: Primarily the rules are set to avoid unwanted situations to arise and neglect or disobedience to these regulations and rules may cause refusal of the vessel alongside the pier or abortion of loading/discharging operation.
- D: Nothing in these regulations relieve the master of any vessel of his responsibility to observe rules set by Norwegian Authorities when his vessel is trading in Norwegian waters.

1 SAFETY

1.1 SLAGEN PORT CONTROL

Slagen Port Control is manned 24 hours a day and can be contacted on VHF channel 14.

When moored alongside the jetty, vessels shall communicate with the terminal by means of a UHF radio. A handset will be provided by the terminal.

Terminal telephone numbers:

Pier control room: (47) 33 37 75 60
OM&S control room: (47) 33 37 75 74
Marine Supervisor: (47) 33 37 75 57

1.2 FIRE - INSTRUCTIONS TO MASTERS

All vessels fire equipment to be well maintained. Water cannons to be overhauled and tested for easy manoeuvring. If vessel is equipped with foam extinguishers, these to be placed in a suitable area and always to be ready for use. Possibility of freezing during winter season to be kept in mind, using the most appropriate method to guarantee quick water/foam supply.

To meet any emergency, your ship must comply with the following:

- a. Fire fighting appliances on the vessel including main and emergency firewater pumps shall be kept ready for immediate use.
- b. Fire hoses of sufficient length to cover the deck area including manifolds shall be run out and connected to the firewater line if not equipped with remote control of fire pumps from ship's control room. At least one fire pump maintaining pressure on the system.
- c. Two portable extinguishers of dry powder type, minimum 12 kilos each, shall be placed near the vessel's manifolds during operation.
- d. An international ship/shore connection shall be available in the vicinity of the gangway.
- e. The master is responsible for ensuring that the shore fire fighting procedures as explained by the Marine Supervisor prior to commencement of operations, are fully understood by all on board.
- f. The master is responsible for retaining sufficient crew on board the vessel at all times for effective fire fighting, and to depart his vessel if so directed by the terminal.
- g. Fire on own vessel:
 1. Give an emergency message over VHF, channel 14, and UHF channel 5, and blow the boat's whistle a number of times (min. 7) with short intervals.
 2. Stop cargo operations immediately.
 3. Close ship manifolds.
 4. Fight the fire.
 5. Close all valves and cargo opening.
 6. Make preparations for leaving berth.
 7. Await orders from ashore.
- h. Fire on another vessel:
 1. You will be advised of any fire on marine terminal or other vessel by dock siren or VHF/UHF.
 2. Stop cargo operations immediately.
 3. Close ship manifolds.
 4. Close all valves and cargo openings.
 5. Make preparations for leaving berth.
 6. Await orders from ashore.

1.3 SAFETY PRECAUTIONS

- A: In order to achieve safe and pollution free operation in port, authorities may, at any time, decide to use extra tugboats, oil booms, oil pollution and safety inspectors, guards etc. Expenses incurred will be charged the vessel involved.
- B: Vessels inside the Port Area (defined as the water area limited by Karlsvikodden in south, Mefjordboen in east, Bastøgr. S.pt. in north and by Smaaskjaer and refinery ground in west), always to be adequately manned to meet and handle possible emergency situations which may arise.

1.4 SMOKING/USE OF OPEN FIRE

Smoking or use of open fire/lights are strictly forbidden outdoors within the Marine Terminal Area. Smoking is allowed aboard vessel in quarters and under conditions permitted at the Master's discretion.

The use of matches and lighters is prohibited except in places where smoking is permitted. Matches and lighters shall not be carried by personnel outside these areas, nor should they be carried on the main deck or in any other place where explosive atmosphere may exist.

Where the use of matches is permitted, such matches must be of the "safety" type.

1.5 PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment such as, but not limited to: Safety shoes, helmets, goggles, clothes with long sleeves/legs, gloves etc. are strongly recommended for all work onboard, and mandatory when ship personnel operates on/from berth area.

1.6 AERIALS

The main transmitting aerial and radar scanner must not be energised while the vessel is alongside unless permission has been obtained from the Marine Supervisor. Essential servicing may require the issue of a hot work permit.

1.7 PORTABLE ELECTRIC EQUIPMENT, NAKED LIGHTS ETC.

- A: No hand or portable lamps, electric or otherwise, except of a type approved by a recognised Classification Society of Authority for use in a vapour laden atmosphere capable of ignition, may be used on any vessel or jetty within the Marine Terminal Area.
- B: Portable equipment like radioes, cellular phones, cameras, video cameras etc. not to be used outside vessels superstructure during port stay.
- C: Hired equipment for filming, cleaning, measuring etc. to be approved by terminal management before being used while vessel is moored alongside. Use of such equipment to be covered by a work permit filled in by jetty operator.
- D: The use of naked lights is prohibited except:
 - 1. In places designated for hot work or under individual hot work permit if covered by a written permit issued by the terminal.
 - 2. In places (if any) where smoking is permitted.

Equipment likely to cause sparking should be treated as naked lights.

1.8 EMERGENCY TOWING WIRES

All vessels alongside the Marine Terminal pier shall provide certified towing wires of sufficient strength secured to the seaward bow and quarter bollards with the towing eyes maintained at water level.

1.9 AIR CONDITIONING/VENTILATION

- A: If at any time it is suspected that flammable vapour is being drawn into the accomodation, air conditioning and mechanical ventilation systems must be stopped and the intakes covered or closed.
- B: The use of window type air condition units with electrical motor is prohibited whilst alongside pier.

1.10 USE OF TUGS, STORES BARGES AND LAUNCHES

- A: Except in emergency cases or when assisting in berthing or unberthing, tugs are forbidden to operate alongside any vessel berthed at the pier.
- B: All small crafts, including tugs, mooring boats, stores barges, repair crafts and launches entering the Marine Terminal Area must be approved by harbour authority. They must be properly equipped for safe operation in vapour laden atmosphere and shall have adequate and efficient fire-fighting appliances.
- C: Except with the special permission of the vessel's master and the harbour authority, small crafts are prohibited from approaching or remaining alongside in tank area if the vessel is loading or discharging crude or petroleum products, ballasting, gas freeing or tank cleaning whilst alongside the pier.
- D: Lifeboats, workboats, crafts etc. are not permitted to use for transport of people and/or stores to/from ship to berths situated within refinery area.

1.11 LOADING/DISCHARGING ACROSS VESSELS

Loading/discharging across vessels while alongside the pier is forbidden unless otherwise agreed between the masters of vessels involved and the Harbour Master.

1.12 REPAIRS

Extensive repairs or hot works not to be carried out without specific permission by Harbour Master. If not otherwise agreed vessel to be ready, at all time, to leave pier on short notice by own propulsion.

1.13 TANK CLEANING

As a general rule, vessel is not allowed to clean tanks whilst alongside. Dispensation might be granted under particular circumstances. When dispensation has been granted, cleaning not to start until the Esso Check List for Tank Cleaning has been filled in and signed by appropriate persons.

Any cleaning of tanks, gasfreeing and/or purging of cargo tanks should take place at least 1.5 N.mile off shore.

ESCAPE ROUTES SLAGEN

- If an emergency situation occurs all non Esso-employed personnel should leave the pier immediately unless otherwise directed.
- . There are several possible escape-routes from pier.
- Main escape-route
Consists of the normal entrance to/from pier. "Exit" signs show direction from all berths.
- Berth North end. From a rescue station at the end of the pier near "the Turning Dolphin" personnel will be picked up by boats, or could use the small rescue craft stationed close to this station.
- . Signs on pier marked "Escape Craft" leads to the station.
- . At the "rescue station", life-jackets, survival suits, and first aid equipment are placed.
- . When arriving at the rescue station, please contact harbour office as indicated at the station. If boats not arrived within reasonable time or the situation is becoming critical the small rescue boat should be launched and used for escape.
- Ladders
. Emergency ladders from pier deck to water on both sides of pier are marked with black/yellow paint and their positions are indicated on the attached sketch.
- Other
. At the south end of berth a combined workboat/emergency craft is placed.

2 Navigational Information

2.1 LOCATION OF THE TERMINAL

Norwegian Chart No. 3 and No. 481 (B.A. 3158).

Slagen Refinery is situated on the west bank of the Oslofjord, about 5 n. miles south of Horten. The marine terminal consist of a pier, about 500 m long, with loading/ discharging berths on both sides. To the south of the main pier there is a small harbour where mooring boats and oil recovery equipment are kept. The terminal and its near surroundings are owned and controlled by Esso Norge AS. It has its own Harbour Office with Marine Supervisors on duty 24 hours a day.

2.2 VISIBILITY

In weather conditions with poor visibility approaching Slagen is supported by the help of Racon at Mefjordboen situated NE from pier HD. If visibility less than 0.5 (times) length of ship use of tug is mandatory for berthing (regardless size of ship).

2.3 CURRENT

The pier is aligned north-south and the prevailing current is setting southeasterly, but direction and velocity can be highly variable. Velocity upto 1.4 knots have been measured. Under normal weather condition, it is recommended to berth port side alongside.

2.4 WIND & SEA

After periodes with bad weather and storm in the Northsea and Skagerak, heavy swell may affect the harbour and in some cases all operations must be suspended and the vessels taken off berth.

The Marine Supervisor may order vessels to leave the pier if excess wind, current, swell or other condition develop which may affect the safety. Notice will be given when possible. For the same reason vessel may be refused alongside.

2.5 COMMUNICATION

Arriving vessels must give proper notices through the agent or directly to the terminal by cable, telex, telefax or mail prior to arrival.

When entering/leaving the fjord, vessels should communicate with the terminal on VHF channel 14. Also for mooring operation channel 14 is to be used.

Masters, when enroute up the fjord, are invited to call the harbour office via Slagen Harbour Radio, VHF channel 14, in order to get updates on wind, current and/or whatever question which may arise.

All movements should be reported to Oslofjorden vts on VHF channel 13 or 18, prior to realization.

After the ship is moored alongside berth, UHF channel 5 is used for communication ship/shore. Radio sets to be placed onboard. UHF is to be used as long as the ship is tied up alongside.

2.6 LOCAL TIME

Norway uses Central European time, therefore local time is one hour ahead of coordinated universal time (GMT). During the summer period Norway uses local summer time, which is two hours ahead of GMT.

2.7 PILOTAGE & SAILING DIRECTIONS TO AND FROM TERMINAL

If the captain and/or officer in charge not holding an area certificate approved by Norwegian authorities, pilotage is compulsory from Ferder to Slagen and vice versa for all foreign vessels. Vessels of 20.000 DWT or more will be piloted by selected pilots especially trained for berthing vessels at the Slagen Marine Terminal.

For the safe handling of vessels and in order to be prepared if a threat to the environment should occur, following precautions are enforced:

- A: For vessels of 20.000 DWT or more entering the fjord in loaded condition when carrying Black Oils or Crude Oils, a tugboat with sufficient bollard pull to prevent the vessel from grounding or any other hazardous situation which may arise in case a black out, or other incidents to the vessel which may cause the loss of steering or power, shall stand by in the fjord and ready to assist on short notice. Practically it means the tug shall be in a position near the Hollenderboen lighthouse at the time when the vessel is approaching the Pilot boarding area, and after rendezvous follow the vessel and assist as required in the mooring operation.
- B: Laden vessels outbound of 20.000 DWT or more, shall when carrying Black Oils or Crude Oils, be escorted by a tugboat for the same purpose as A. above from berth or anchorage to a position well clear of the Hollenderboen lighthouse.
- C: For vessels upto 160.000 DWT while alongside the Slagen Refinery pier, one tugboat shall be kept on stand by in the harbour areas as fire and safety watch. for VLCC's two tugboats shall be kept on stand by.

Expenditures related to this paragraph shall be for the owners/charterer's account.

Pilot area position: N59° 05'
E10° 34'

2.8 APPROACHING

Vessels should always keep safe distance to shore facilities and equipment when approaching Slagen. Safe distance from "small craft harbour" at Riveskjaer is set to be min. 1.25 cables off shore. Speed is to be kept as low as possible when manouvering within port area. Max. speed when 8 cables "off berth" is 5 knots steadily decreasing. When approaching berth the approach angle should be as close to zero as possible.

2.9 ANCHORAGE/USE OF ANCHOR

- A: For vessels awaiting berth, orders, tank cleaning, repairs etc., a convenient anchorage with reasonable shelter and holding qualities is found to the north of the pier. Vessels will normally drop anchor in a position as advised by the pilot or by the Harbour Office.
- B: Vessels at anchor to comply with the Harbour Regulation and masters should take care not to drop anchor within distance of 0,4 N. mile off the pier head. He should also take care not to limit other vessels safe entrance to/from berth. We recommend the use of one of the designated areas for anchorage; Alpha, Bravo or Charlie. Alpha is primary for smaller vessels while Bravo and Charlie is dedicated for larger vessels.
- C: The pier is surrounded by a submersible oil boom anchored to the sea bed. The enclosed map shows the location of the boom and surrounding area affected by the installation. The masters are requested not to use anchor within this area unless this is absolutely necessary to avoid a dangerous situation. Tugboat to be used if in doubt. Vessel can be held responsible for damage to the oil boom.
- D: Please note that the sea bed may offer poor holding ground. Maximum chain advised in bad weather conditions. Tight anchor wath to be kept at all time.

2.10 TUGBOATS

Tugboats are available in Oslofjorden for operation at the port of Slagen. They can be contacted on VHF ch. 14. Tug service to be ordered in advance through ship agents. Port regulation demand specific numbers and size of tugboats, and only tugs approved by ENAS are accepted in operation at Slagen.

2.11 MOORING BOATS

Mooring boats are compulsory if vessels are SDWT 20.000 or more or if vessels are equipped with heavy moorings. Two mooring boats are normally available for handling of mooring lines. These boats are not dedicated to be used as tugboats unless in emergency. If master and/or pilot are not comfortable with the vessels capability to stay alongside while ropes are picked up without the use of own manoeuvreability tugs or extra tugs should be hired in.

3 Port Regulations

3.1 ACCEPTANCE CRITERIA

All ships shall comply with IMO and Terminal Regulations. All ships calling the terminal must be inspected, screened and approved by company authority.

3.2 PRE-ARRIVAL INFORMATION

Prior to arrival the Harbour Authorities will request pre-arrival information via telefax or mail. Before arrival, the master shall inform the terminal about the following, either via his agent or direct to the terminal on mail or telefax:

- A: Ship's name and callsign (ex-name).
- B: Flag/Nationality.
- C: Name of master.
- D: Owners.
- E: Telex/fax no./Mail adr.
- F: IMO no.
- G: Gross tonnage.
- H: Summer deadweight.
- I: Length overall and beam.
- J: Draught fore and aft.
- K: Manifold connections; number and sizes, distance from bow/stern, height above waterline and deck, distance from vessels side.
- L: Last port of call.
- M: ISPS level.
- N: Confirmed ETA (local time and date).
- O: Whether loaded/part loaded or in ballast. If loaded, nature and quantity of cargo, if ballasted, type (segregated/oily) and quantity to be discharged ashore and estimated deballasting time.
- P: Quantity of cargo to be loaded/discharged, and requested loading/discharging rate.:
- Q: Defects in vessel or equipment affecting discharging/loading performance or manoeuvrability.
- R: Confirmation that inert gas system, if fitted, is fully operational, and, if inerted, that the maximum oxygen content of cargo tanks does not exceed 8% by volume.
- S: Three last cargoes.
- T: Mooring equipment.

3.3 TRAFFIC REGULATIONS, HARBOUR AREA

No vessel, regardless of size, is permitted to move inside the Slagen Harbour Area unless authorized by the terminal or national authorities in cooperation with terminal.

3.4 SAFETY PRECAUTIONS

1. In order to obtain maximum operating range for the cargo transfer arms/hoses, the ship should be positioned such as the ship/shore manifolds is as near as possible direct opposite each other.
2. Before arms are connected; the moorings should be checked and approved by shore personnel.
3. Boats equipped for firefighting and oil spill response will be kept stand by for as long as the vessel lies alongside the pier¹⁾.
4. A dedicated Vessel Safety Inspector shall be placed on board all vessels of 20.000 DWT or more while operating alongside the pier or carrying out any cargo handling at anchor in the Slagen harbour area. If the harbour authorities find it necessary due to linguistic problems or other reasons which may affect safety, Inspector shall be placed on board any size vessel while alongside one of the berths¹⁾.
5. The Safety Officer, Pier Operator, OM&S Control room and the Chief Officer shall be in possession of a portable UHF radio tuned in on channel 5. Such radios will be made available from the Harbour office.

1) Dispensation to this rule can be granted by the Harbour Master only to vessels in regular coastal trade and only when the ship's staff is well known and has proven to be highly competent.

Expenditures related to this paragraph shall be for the owners/charterer's account.

3.5 WIND LIMITATIONS

Weather forecasts will on request be made available from the Harbour Office, whom also will alert the master if gale warnings are in force for the area.

Wind tolerances for normal operation of the pier are 25 knots average 10 min. period tending to set vessel off jetty.

If reaching above limit the vessel should be ready to:

- a) Stop operation and drain arms/hoses.
- b) Close manifolds.
- c) Close all tanks and ullage openings.
- d) Confirm ship's engine is ready for use.

The marine supervisor will decide if any action is necessary based on defined limitations.

If wind velocity increases to 35 knots - arms to be disconnected and vessel ordered to be stand by for leaving berth. The harbour authorities will decide if and when the vessel shall be taken off berth.

3.6 PRE-TRANSFER MEETING AND INSPECTION

Before any operations commence, a pre-transfer meeting will take place between the terminal representative and the master or the officer in charge of cargo operations. They will:

- A: Complete and sign the ship/shore safety check list.
- B: Discuss any deficiencies shown up by the above check list and agree on any additional precautions required. The terminal reserves the right to refuse to load a vessel if the requirements are not met.
- C: Discuss and agree on procedures and operations listed in the PRE-TRANSFER MEETING check list.

3.7 DATA AND RULES FOR VLCC AT BERTH NO. 1

Data for Slagen pier berth No. 1 (east side):

1. Water depth alongside berth: 20 m (66 feet) by normal water level.
2. Maximum permissible draught: 19 m (63 feet) at water density 1,018.
3. The dredging line goes along the jetty front and slopes back from the corners of the breasting island, and southward to a distance of 185 m from the crude discharge rack.
4. Maximum permissible LOA of vessels which may be accommodated on full draught as under 2 above, is 350 m (1148 feet) provided stern to manifold distance does not exceed 170 m (558 feet), and displacement does not exceed 290.000 tons.
5. Four by 12" steel arms, ASA flanges and quick couplings, are available for discharge, and one by 8" steel arm for bunker. The latter one to be connected forward of the cargo manifolds. The arms can be operated within the following limits:
 - From +3.90 to +22.5 m above sea level (NWL).
 - From 2.4 to 9.2 m off fender line.
 - Maximum 3 m to each side of center line.
6. Safe working load on mooring hooks and pulleys:

-	Hooks for head/stern lines	90 mt	(4)
-	Hooks for head/stern lines	40 mt	(6)
-	Hooks for brest lines	100 mt	(4)
-	Hooks for brest lines	40 mt	(4)
-	Hooks for fwd. spring lines	90 mt	(2)
-	Hooks for fwd. spring lines	40 mt	(2)
-	Hooks for aft. spring lines	40 mt	(2)
-	Pulleys fwd/aft.	130 mt	(3)
7. Mooring capstans: 3 metric tons tractive power.

The wires must be securely fastened to the ship's bollards.

4 SECURITY

4.1 GENERAL

Slagen Harbour has implemented the ISPS-Code. All persons, stores and/or equipment transported through the terminal should be declared safe by vessels, vessels owner or their representatives.

The harbour Authorities will work closely with ships officers and crew to avoid any unwanted actions and/or intrusions.

4.2 ACCESS TO BERTHS

A: No person will be allowed inside the Refinery Area without special permit.

B: The master shall arrange for a crew list to be deposited with the terminal representative on arrival, and shall when possible, include the names of all persons expected to visit the ship, or persons to sign on.

Only pre-announced persons shall be allowed access to the berth area, and they must comply with any restrictions imposed upon them.

The terminal also reserves the right to require that unannounced visitors, or persons representing a hazard to the terminal's property be personally identified by a responsible officer and escorted while in the restricted area.

4.3 PORT SECURITY ORGANIZATION

Harbour master act as port facility security officer (PFSO).

Harbour officer on duty will normally act as assistant PSFO and arrange contact and pass on all requests from vessel regarding security.

In case of emergency or other situations where a direct contact are important, please call the PFSO (telephone on pre-transfer check list).

4.4 NON ISPS PORTS

Arriving from non ISPS-ports or use of local small ports could result in IISPS-level 2 or 3 when berthing at Slagen. All expences related to such cases will be for vessels account.

5 MOORING

5.1 GENERAL

General rules:

1. All vessels shall be adequately moored with a sufficient number of good ropes/wires. A mooring plan should be worked out and agreed. If moorings layout changed and/or extra moorings are used mooring plan should be updated.
2. The crew shall at all time monitor moorings and keep equal tension on all lines.
3. Mix of steel wires and synthetic ropes in one and the same direction is not acceptable and should be avoided. Synthetics must be of same material. Spliced, uncertified, moorings not accepted.
4. Self tensioning winches are not allowed used.
5. The ropes/wires shall be secured on bollard or drums with sufficient numbers of turns not to slip under any circumstances which may arise, unless when tended. When winch mounted moorings are used, the brake setting, number of layers and reeling direction shall be in accordance with the manufacturer's recommendation in order to achieve maximum designed holding capacity, once securely moored, the winches should be disengaged.
6. If hydraulic setting of brakes are used, the hydraulic system is to be disengaged and the brakes left in manual position with winches disengaged.

5.2 MOORING BOATS PROCEDURE

Spring lines:

Mooring boats will pick up spring lines fwd. and aft from vessels fat body area when ordered, even when propeller and/or thrusters are running.

Head/stern lines:

The master should ensure that propellers and/or thrusters are stopped before operation with mooring boats starts in propeller thruster area. Vessels equipped with variable pitch propellers should ensure lowest possible revolution and neutral position of wings. Prior to any subsequent use of such equipment, mooring boat crew should be given necessary time to leave affected area.

Mooring lines should be paid out and operated according to professional procedures without any redundant lines in water. The operation should be supervised by an experienced officer or crewmember to avoid dangerous situations. If any situation arise where the operation from the vessel indicates a safety threat to the mooring boat and/or her crew, the mooring boat will "disconnect", or let go" any ropes/lines and leave area until safe conditions are established.

5.3 MOORING VLCC:

1. Vessels are moored port side to pier (i.e. heading north).
2. Under normal weather condition up to 4 tugs, are used in the berthing operation. Two mooring boats, 200 HP, are available for line handling.
3. Sixteen mooring lines are required from the vessel.
4. Mooring sketches handed to master on embarkment of harbour pilot to be followed in detail.
5. Communication between pier, pilot, tugs and mooring boats are maintained by VHF channel 14.
6. Maximum approach speed permissible to the berth is tabulated on back of the mooring sketch pamphlet, and the vessel's actual approach speed is continuously monitored by a Doppler Radar on the pier and the readings communicated to the pilot/master on VHF channel 14.
7. For vessels equipped with split drum mooring winches, minimum 7 turns and/or maximum 2 layers of wire will be accepted on the working drum once moored in order to obtain designed brake capacity as near as possible.
8. For vessels with single drum mooring winches, the maximum layers of rope/wire on the drum once moored, and the brake setting, to be discussed in each case.
9. The recommended moorings for Slagen pier for a VLCC should consist of 10 steel wires (5 each end) provided with synthetic tails of about 10" by 30 feet, to be used as head-breast-and sternlines. The fore and aft springs should be steel wires only. Irrespective of condition, tails older than 12 months shall not be accepted and in such cases.

5.4 RETENTION

5.5 NO's MOORING MIN.

SHIP SIZE	NO. MOORINGS
0000 - 2.000 DWT	4 (1 + 1 + 1 + 1)
2.001 - 5.000 DWT	6 (2 + 1 + 1 + 2)
5.001 - 10.000 DWT	8 (2 + 2 + 2 + 2)
10.001 - 17.000 DWT	10 (2 + 1 + 2 + 2 + 1 + 2)
17.001 - 45.000 DWT	12 (3 + 1 + 2 + 2 + 1 + 3)
45.000 - 150.000 DWT	14 (3 + 2 + 2 + 2 + 2 + 3)
150.001 - 250.000 DWT	16 (4 + 2 + 2 + 2 + 2 + 4)

5.6 REDUCTION DUE TO AGE

ALDER/AGE	WIRE	TROSSE/ SYNTHETIC	BREMS*/BREAK*
0-1 år/year	0%	15%	0%
1-2 år/year	0%	25%	0%
>2 år/year	0%	40%	0%

* Only if testing annually. Otherwise 50%.

5.7 MOORING PLAN

Slagen Harbour Office will issue preliminary mooring plans for vessels calling. They will be transmitted to the ship or brought on board by pilot prior to arrival. A final mooring plan should be worked out in cooperation with the master (See 5.1.1).

5.8 BERTH MOORING LAYOUT

6 LOADING / DISCHARGING / BUNKERING / BALLASTING

6.1 GENERAL

A: Operations not to start until:

1. Terminals Safety and Pollution check lists have been filled in and signed by both parties.
2. All valves are checked so that those only which are to be used are open.
3. Manifolds not to be used properly closed and blanked off, sea valves and overboard valves closed and sealed.
4. All scuppers on main- and poopdeck effectively plugged or closed.
5. At least two valves segregating different products and different line systems.
6. Gas venting systems open and properly set.
7. PYROPHORIC IRON: Vessels equipped with "IGS", shall not commence discharge of crude oil unless inert gas system is fully operational and positive pressure applied in all cargo and slop tanks. Discharge must stop immediately if inert gas system fails, or for any reason a positive pressure is not maintained in all cargo spaces. Marine supervisor must be informed.

B: During performance of above operations, following to be observed:

1. A competent officer should be in charge, and adequate staff to be stationed on deck to ensure safe operation of all the vessel's functions.
2. Pipe lines and hoses on deck must be adequately earthed and should be checked for leakages at regular intervals.
3. All portholes and doors on board to be kept closed at all times. Ventilators shall be trimmed dependent on prevailing conditions and suitably adjusted as found necessary to avoid entry of petroleum gases. The skylights of engine-room, boiler-room and galley shall be suitably adjusted as necessary.
4. All tank hatches to be kept closed and ullage plug openings adequately protected by approved wire gauze screens or other flame proof devices. Barges and vessels of less than 2000 DWT may request permission to open lids when topping off in order to avoid risk of overtopping.
5. The master or officer in charge shall, if necessary, request the jetty operator to reduce the loading rate in the event of an accumulation of petroleum vapour on deck or any other circumstances which, in his opinion, is or may become dangerous. Similarly, the discharge rate shall be regulated if requested by the shore personnel.

C: IMPORTANT NOTES

1. Shore lines are not equipped with non-return valves. Back-flow of product is therefore possible.
2. All flanges presented to shore should be according to ASA standard with thickness no less than 25 mm.
3. When topping cargo and/or bunker tanks, the officer in charge shall request the responsible jetty operator to reduce the loading rate as may be necessary to avoid overflow.
4. When discharging from low level tanks, pumping rate should be reduced as necessary to avoid surging which may cause strong vibration and possibly damage to shore discharge arms.
5. Ullage in tanks which have been topped off, to be rechecked in order to avoid unwanted overfill caused by a possibly leaking valve, bulkhead or pipe.
6. No persons engaged in loading or discharging shall carry mechanical lighters, matches or any appliances whatsoever which may be a source of ignition.
7. Loading/discharging operations to be suspended and all cargo tank lids and ullage openings to be kept closed during thunder storms.

6.2 POLLUTION AVOIDANCE

- A: Pollution of the Port Area with oil, ballast water, bilge water or any other polluted fluids is strictly forbidden and following precaution shall be taken:
1. All deck areas should be sealed with scupper plugs. Rubber plugs preferred, other material accepted on case to case basis.
 2. All ballastwater carried in cargo compartment shall be discharged into a shore ballast tank.
 3. Oil on deck should be dried up at once.
 4. Adequate amount of clean-up material should always be at hand.
 5. The deck bilges should always be clean, ice and water free. If raining, or when there is a collection of water, e.g. due to steam leakages, the bilges should be emptied at intervals into a sloptank, or if such arrangement does not exist, by opening the appropriate scupper for a short while and under special supervision.
 6. The shore tanks are situated on high ground and once connected, the content may gravitate into the ship's tanks if allowed to do so. Therefore ship's manifolds always to be kept closed when not actually in use. This rule applies even if stopages in loading/discharging operations are short, and regardless shore valves are closed or not closed.
 7. If an unexpected or dangerous situation arise onboard or ashore while loading, ship loading manifold valve(s) should be closed immediately, regardless shore pump running or not running.
 8. Allowed maximum crude discharge rate is 12000 m³/h.
 9. On arrival, as part of pre-transfer conference, the chief officer or officer on duty shall discuss the vessel's loading/discharging plan with the marine supervisor and jetty operator, and agreement should be reached regarding:
 - a) product sequence.
 - b) Loading/discharge rate.
 - c) Stand by time for topping off tanks.
 - d) Emergency stop-radio communication.
 - d) Ullage and other matters regarding safe operation.
 10. The officer on duty shall make sure that all vessel's functions are under control. *If in doubt, operations to be stopped until control is fully regained.*
- B: Following precautions to be taken when ballasting:
1. Discuss the operation with the marine supervisor on duty.
 2. Oil in the piping system between suction side of the pump and the sea valve to be drained into an empty tank. If the tank is inerted, release pressure first.
 3. Before the sea valve is opened, make sure there is sufficient suction on the pump to hinder any drop of oil to escape through the sea valve, and one man should remain standing by ready to close the sea valve in case the pump should trip when all valves are opened.
 4. The water area adjacent to the sea suction used, should be carefully checked for oil film before and after opening of the sea valves.
- C: To avoid overfilling during bunkering keep in mind:
1. Construction and vapour outlets of tanks.
 2. Position of sounding/ullage piping.
 3. Dimension of goose-necks.
 4. Condition of bunkering equipment in use.

6.3 BUNKERING/LIGHTERING OPERATIONS

Vessels are not permitted to perform lightering or bunkering operations within Slagen harbour area unless approved by Harbour Master. Such operations will be treated with the same precautions as if they were done alongside berth.

6.4 INSPECTION

A: Esso shall have the right to board any vessel within the Marine Terminal Area at any time to ensure that these regulations are being observed.

B: Where and when a Vessel Safety Officer inspector is placed on board in accordance with the regulations, his main functions are:

1. Have Safety/Pollution Check Lists duly filled in and signed by both parties.
2. Keep an eye on functions on board which may lead to dangerous situations such as fire hazard, insufficient moorings or tending of moorings, oil spill or other pollution of harbour water or surroundings etc.
3. Maintain UHF radio contact on channel 5 with the officer in charge on deck, the Jetty operator and the Marine Supervisor on duty.
4. If he discovers abnormal or unwanted situations or conditions he shall notify the officer in charge and request him to take necessary corrective action.
5. Normally the inspector is to act only as advisor and should not interfere directly in vessel's operations. If, however, his request is not taken into account, he shall at once notify the Master and Marine Supervisor. If, in his opinion, a situation arise which require immediate action in order to avoid damage to personnel or property, he is empowered to stop loading, discharging, ballasting or bunkering at once and take such action he finds appropriate as the first step to avoid a sudden risk.
6. He shall follow up on turnaround and ensure that the vessel's as well as shore loading/discharging equipment is utilized to its full extent, safety aspects being kept in mind.

6.5 DISCHARGE OF BALLAST/SLOPS/WASH WATER

For ships calling to load/discharge at Slagen limited reception facilities are available for ballast, wash water and/or slops. Master to warrant that such ballast, wash water or slops not containing any phenols, detergents chemicals or lubricating oil. The terminal require early notice if such volumes to be discharged and a handling fee to be paid by the ship.

6.6 SAMPLING FROM CARGO TANKS

All sampling should be carried out on closed sampling system if possible. If no closed sampling system available or not used for any reason, please state reason under remarks.

6.7 MANIFOLD DISTRIBUTION

7 GARBAGE

7.1 GENERAL

Slagen harbour has implemented source separation of garbage. The containers for different types of garbage are placed at the berth entrance. Garbage needs to be transported from vessel to the station by ships crew or hired contractors from Slagen harbour service.

The arrangement at Slagen covers all types of garbage/waste and all volumes will be handled. Volumes described as "normal" will be included in fixed garbage fee. If volumes exceeds "normal", all volumes will be treated as "specials" and all handling costs to be charged the vessel.

A table specifying volumes and prices will be available on request.

Vessel to inform terminal about amount and type of waste material to be landed at least 24 hrs prior to call.

7.2 DECLARATION

When calling at Slagen, vessel should prepare a "Declaration of garbage/residues" form. (Vessel own type of general list supplied from shore).

7.3 HANDLING COST

- A fixed fee covers all "normal" garbage. This fee to be charged all vessels calling at Slagen regardless if landing garbage or not.
- A variable fee covers all "special" garbage.

8 INFORMATION

8.1 INFORMATIVE DUTY

- A: The master shall on own initiative inform the Marine Supervisor of any known failures or weaknesses in his ship's hull, piping system or equipment, which may cause oil spills or other unwanted situations.
- B: Terminal are obliged to inform the master of similar situations ashore. Terminal will also assist the master regarding operational, marine technical and safety problems.

8.2 CLOSING THE HARBOUR

- A: The Marine Supervisor may order vessels to leave the pier if excess wind, current, swell or other condition develop which may jeopardize the safety. Advance notice will be given when possible.
- B: For the same reason vessel may be refused alongside.

8.3 PERMISSIBLE DRAUGHT

Maximum permissible draught alongside pier:

Berth No. 1 (east side) = 20.1 m
Berth No. 2 (west side) = 10.5 m
Berth No. 3 (west side) = 10.0 m
Berth No. 2+3 (west side) = 10.0 m

Average water density considered as 1.018.

8.4 GANGWAY

- A: All berths are equipped with gangways for coasters which will accommodate deck elevations up to 5 m above sea level. In addition, berth No. 1 is provided with a gangway capable of reaching maximum deck elevation of 22 m (NWL) and berth No. 2 with a gangway reaching deck elevation up to 14 m (nwl).
- B: Whenever fixed gangways not used, a safety net of adequate size should be rigged. If such net is not available aboard, the terminal may provide one.
- C: A life buoy with at least 15 fathoms line always to be at hand near the gangway.

8.5 COMMUNICATION, SHIP/SHORE

- A: While alongside the pier, the officer in charge shall be equipped with UHF-radio tuned in on channel 5.
- B: The Jetty Operator to be contacted when action required products, ballast, couplings, tankinspection and gangway operations. Contact should be made by calling: Slagen Jetty Operator, Slagen Jetty Operator, this is (vessel's name).
- C: The Harbour Office or Marine Supervisor to be contacted regarding functions, moorings, agents, weather and current conditions etc. Contact will be obtained by calling: Slagen Harbour Radio, Slagen Harbour Radio, this is (vessel's name).
- D: When a safety/pollution inspector is placed on board, he will assist in establishing good communication with the shore personnel. He will listen in on all communication on the VHF and UHF and thus be able to correct misunderstandings or he will act as a contact between the two parts.

8.6 OIL SPILL RESPONSIBILITY

- A: The terminal is obliged to report to the local police every occurrence of oil spill into the harbour water or its surroundings.
- B: Esso shall demand full compensation of all cost incurred regarding damages, clean up actions etc. related to spillage or escape of oil, or mixture containing oil from any vessel calling the Slagen Port Area.
- C: If a vessel has caused an oil spill or is suspected to have caused one, a bank guarantee sufficient to cover all expected expenses related to the spill, - may be requested present prior departure of such vessel. If this request is not complied with, Esso shall demand the vessel arrested until such guarantee is made available. The guarantee can legally be requested even if the cause and guilt of the incident still is unclarified upon departure.
- D: Esso reserve the right to request that the crew of the vessel involved in an oil spill, shall participate in the clean up of the harbour and/or its surroundings in order to limit the harmful consequences of such spill.

8.7 AIR POLLUTION

It is the master's responsibility to ensure that dense smoke or soot does not emit from the ship's funnel in excessive amounts. Otherwise a claim may be opposed upon the vessel in such cases.

8.8 MEDICAL SERVICES

Only limited medical services are available at the terminal. Any medical requirements for ship's personnel upon arrival should be arranged through the vessel's agent prior to arrival. Emergency medical services while berthed at the terminal may be arranged through either the vessel's agent or terminal operating personnel.

8.9 FIRE FIGHTING EQUIPMENT ON JETTY

The jetty is equipped with five foam/water monitors, of which four (4) is remotely controlled. Capacity of each is 2400 ltr./min.

8.10 TRANSPORTATION, SHIP STORES HANDLING

Any stores transportation across tank deck must be handled before or after cargo operations. Only small items of ship's stores, if carried by hand, may be taken on board and carried across tank area during cargo operation.

8.11 WORK ON/FROM JETTY

Ships crew not to perform any work on or from jetty except for painting of ships side. If painting from berth, life saving equipment should be used, and work permit issued by berth operator.

9 DRUG AND ALCOHOL POLICY

9.1 GENERAL

All personal use, storage, distribution and/or sale of drug and alcohol are prohibited with refinery area including the port. Vessel calling should have implemented and clearly announced industry standards for D&A (ref. ISGOT).

9.2 REACTIONS

Intoxicated personnel to/from ship will not be given permission to enter the berth area unless escorted by the vessels master or chief officer. Such incidents will be reported.