

# **TERMINAL DI ENERGIA ARUBA N.V. (TdEA)**

## **JETTY REGULATIONS AND PORT INFORMATION**

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## **A PRE-ARRIVAL INFORMATION, REGULATIONS AND REQUIREMENTS**

### **A1 LOCATION OF FACILITIES**

TdEA N.V. is located in the port of San Nicolas at the Southeastern end of the Island of Aruba, Latitude 12° 26'N, longitude 69° 55'W.

TdEA is the only operator of the port.

### **A2 APPLICATION OF REGULATIONS AND REQUIREMENTS**

TdEA N.V. means: – The inner harbor of San Nicolas Aruba, including all works and water area contained therein, the area enclosed by the reefs to the East of the Inner Harbor known as the HDS area and Rodger's Beach and all waters of the sea surrounding the above up to 1640 feet from all points of the shore and including Reef Berths. Ships lying at that anchorage known as the Reef Anchorage shall also be deemed to come within the scope of these Regulations. (See map in Appendix 1). These Regulations and Requirements described hereafter shall be strictly observed within TdEA's Terminal, by all persons including personnel of ships, tugs, barges, launches, mooring boats and other craft. In the event of any conflict between these Regulations on the one hand and any Island Government law on the other hand, the latter shall prevail to the extent to which they are in conflict with these Regulations.

### **A3 KNOWLEDGE OF REGULATIONS**

The Master or person in charge of any vessel whilst within TdEA N.V. shall have adequate knowledge of these Regulations and Requirements and ensure that his crewmembers are fully informed of all requirements. In the case of small craft operating within TdEA N.V. the Owners must ensure that their employees know and will obey these Regulations and Requirements. Additional copies of these Regulations can be obtained from the Oil Movements Control Center located near the main gate or from Ship's Agents.

### **A4 INSPECTION**

In accordance with the I.S.P.S regulations and subject to the agreement of the Government Custom and Immigration Authorities, any authorized representative of TdEA shall have the right to board any vessel within TdEA N.V. at any time with the purpose of ensuring that these Regulations are being observed.

### **A5 PERMISSION TO ENTER TDEA'S TERMINAL**

No ship, tug, barge, launch or other craft shall enter TdEA N.V. including the Reef Anchorage, without first obtaining the permission of the Marine Operations Manager or his authorized deputy (TdEA-Marine), for vessels coming to load or discharge they must have a duly appointed Agent through whom all disbursements and ship's business can be accessed.

**A6 SHIP TO VACATE BERTH ON REQUEST BY TDEA**

As a condition of entry in TdEA N.V., a ship must vacate a berth promptly on being requested by TdEA (see A23 State of Readiness whilst alongside).

**A7 ETA REQUIREMENTS**

All ships shall advise their ETA at TdEA 72, 48 and 24 hours in advance of arrival via Telex, Fax or Email through appointed agents and be able to communicate with "TdEA" on VHF Channels 16 and 08 when within range. See C2 for pre-arrival information required on cargo, bunker and ballast operations. If a ship has received damage and/or is leaking oil this must be advised in the ETA advice so that the ship can be inspected by TdEA before entering the port.

**A8 ANCHORAGES**

If for any reason, a ship is required to anchor prior to or after berthing at TdEA the normal anchorage (known as the outer anchorage) for the port of San Nicolas is centered about Lat. 12° 20'N, Long. 70° 04'W. about 11 miles SW of San Nicolas where water depths are about 20 fathoms (120 feet). Should "TdEA" by VHF advise a ship to anchor on arrival it is this anchorage, and no other, which is meant. A secondary anchorage known as the "Reef Anchorage" is controlled by TdEA and ships should only anchor in this anchorage with the agreement of "TdEA". (See A17 for anchoring at "Reef Anchorage"). It is situated off the reef between the eastern exit and western entrance to the inner harbor, has a deeply shelving and uneven bottom with water depths ranging between 66 feet and 328 feet within 1640 feet of the reef. The anchorage is suitable for a maximum of 3 or 4 ships of up to about 100 K DWT. This anchorage is shown in the general map of the facilities in Appendix 1. The anchorage positions are numbered 1-3 from East to West and, generally; a ship should anchor in the eastern most vacant spot. Care must be taken not to obstruct the entrance to and exit from the inner harbor.

**A9 TIDAL AND CURRENT INFORMATION**

The tides are diurnal with maximum amplitude of 18 inches (457 mm) but the water level in San Nicolas harbor is influenced more by meteorological conditions than by the tides. The datum used at San Nicolas is MLW and the water level is not likely to fall more than 6 inches (153 mm) below this. The current is influenced by the Trade Winds. It generally runs WNW, parallel to the coast of Aruba between 0.5 and 2 knots but a counter current of uncertain rate sometimes runs close to the coast and this has to be guarded against, particularly when entering the inner harbor, the entrance to which is across the current direction.

## **A10 PILOTAGE**

Pilotage is compulsory for all vessels when entering or leaving TdEA's Terminal or mooring therein except for vessels less than 50 ft (15 meters) regularly plying within TdEA N.V.. Masters of ships anchoring or leaving the Reef Anchorage may do so without the assistance of a pilot but those unfamiliar with the anchorage are strongly advised to use the services of a pilot before anchoring. TdEA does not provide a pilot for anchoring at the outer anchorage.

Masters must sign the Pilot's indemnity certificate before Pilotage commences. Ships using TdEA N.V. are liable for any damage caused by the ship to any of TdEA's property or to any other vessel lying therein whether or not a local pilot is assisting at the time.

## **A11 PILOT BOARDING AND LANDING OFFSHORE**

All pilots shall be boarded or landed from a ship not located alongside a berth by means of a pilot ladder when the freeboard does not exceed 30 feet or a combination of accommodation ladder and pilot ladder when the freeboard exceeds 30 feet. All pilot ladders shall conform to the requirements of SOLAS 1974 Chapter V, Regulation 17. A pilot may refuse to board a ship if the means of access does not conform to the above. If the pilot agrees, a pilot hoist may be used in lieu of an accommodation ladder and pilot ladder but a standard pilot ladder shall be immediately available in the event of a failure of the pilot hoist. As it may be necessary for ship's engines to be stopped whilst the pilot is transferring between pilot boat and ship, ships masters should not approach the coast too closely for boarding the pilot. As a general rule pilots board about 1-2 miles WSW of the inner harbor entrance for vessels berthing at the inner harbor. For vessels bound for reef berths, pilots will board in a position about 2- 2.5 miles west of the reef berths with the ship on an easterly course and a speed of about 2 knots. For vessels bound for HDS and Coke Berth, pilot boards 1.5-2 miles SW of the HDS harbor entrance

## **A12 NOTICE OF READINESS**

Notice of Readiness will be signed for receipt only by the Oil Movement & Shipping loading master after inspection and calculations are completed and the vessel is in all respects ready to load or discharge.

If it is subsequently found that the ship was not, in all respects ready to load or discharge; in the case of loading, due to excessive deballasting time or unsuitability of tanks which, on inspection, require further cleaning or preparation for the nominated cargo; or in the case of discharging due to unavailability of pumps or inadequate temperature of cargo, a NOTE OF PROTEST will be delivered to the ship which will automatically cancel TdEA's's initial acceptance of the Notice of Readiness. In such cases the ship must prepare a revised N.O.R., canceling the first one and stating a time tendered in accordance with its actual readiness.



## **A13 TUGS**

Tugs are provided by TdEA and their use is compulsory. Towlines are provided by the tugs. Masters must sign the tugs' indemnity certificate presented by the pilot on boarding before tugs are made fast. The ship is liable for any damage to or caused by the tugs whilst assisting. Communications between ships and tugs during maneuvering are normally carried out on VHF Channel 08, in English. In case of a loss of VHF contact the following signals shall be made on the ships' whistle or siren:

### **Forward Tugs** (alongside or on hook)

1 short blast – ship's head to starboard  
Tug alongside port side – push  
Tug alongside starboard side – pull on beam  
Tug on hook – pull starboard now

2 short blasts – ship's head to port  
Tug alongside port side – pull on beam  
Tug alongside starboard side – push  
Tug on hook – pull port bow  
5 or more short blasts - stop

### **Aft Tugs** (alongside, tractor or on hook)

1 prolonged blast followed by 1 short blast – ship's head to starboard Tug alongside port side – pull on beam  
Tug alongside starboard side – push  
Tractor tug – pull on port-quarter (in)

1 prolonged blast followed by 2 short blasts – ship's head to port Tug alongside port side – push  
Tug alongside starboard side – pull on them  
Tractor tug – pull on starboard quarter (out)  
1 prolonged blast followed by 5 or more short blasts - stop

### **All Tugs**

3 short blasts – stop ship  
Tug on hook forward – stop  
Tug alongside – pull back (alongside)  
Tractor tug aft – pull right aft

It is emphasized that whistle signal form of communication between ship and tugs is for emergency use only and that, if possible, maneuvers should be aborted or suspend until VHF contact is again possible.

#### **A14 LOADED AND BALLAST DRAUGHT REQUIREMENTS**

Each of the berths within the inner harbor, HDS and coke berth is dredged and the pilot will advise the maximum allowable draught. It shall be recognized that loaded ships may be draught restricted at the next scheduled port after Aruba. For safe handling of tankers in all normal weather conditions and at all TdEA N.V. berths the following minimum draughts are recommended:

DWT	DRAUGHT FORWARD	DRAUGHT AFT
10,000 – 20,000	8 Feet	18 Feet
20,000 – 30,000	10 Feet	20 Feet
30,000 – 40,000	14 Feet	22 Feet
40,000 – 50,000	14 Feet	24 Feet
50,000 – 90,000	16 Feet	26 Feet

Note that ships arriving or sailing with part cargo only are also recommended to conform to the above minimum draught and maximum of 10 feet trim by the stern. In special circumstances and in very good weather conditions it may be possible to safely handle ships with less draughts and/or a different trim than that recommended above. In these cases Masters should consult with the duty Marine Dispatcher.

#### **A15 BOW TO CENTER OF MANIFOLD RESTRICTIONS AT FINGER PIERS**

In common with all finger piers the distance from the tanker's most forward underwater point to center of manifold has to be known accurately by TdEA to ensure that there is sufficient length of deep water at the berth forward of the loading arm position. Due to the position of the loading arm structures and the angle of the piers with the shoreline each side of finger pier has a different limitation. All ships using the inner harbor (which could be any ship under 100 K DWT) must advise "TdEA" their accurately measured horizontal distance from extreme bow (including the bulb bow) to the center of their manifold connections so that each ship is allocated a berth with sufficient length of deep water forward of the loading arms.

#### **A16 DEBALLASTING FACILITIES**

All dirty ballast must be discharged into shore tankage; however, the capacity of the shore reception facilities is limited. All clean, oil free, ballast should be discharged over side; the responsibility for avoiding oil pollution rests with the ship. As a general guideline ships arriving in ballast should have no more than 8% of their summer deadweight as dirty ballast requiring to be pumped ashore (e.g. a 50,000 DWT tanker should have no more than, 4,000 long tons of dirty ballast). The remaining ballast needed to conform to the minimum draught requirements given in A14 above must be clean for pumping over side without causing pollution. Ships may be required by their operators/Charterers to arrive with clean ballast and consolidated slops.

### **A17 USE OF ANCHORS**

If an anchor is used during the berthing maneuver it shall be hove home on completion of mooring. No ship may lie alongside a berth with an anchor on the bottom. Loaded ships should not drop an anchor within the inner harbor; HDS pier or coke berths unless in an extreme emergency, as bottom clearance is limited with the danger of running over the anchor which could pierce the hull.

### **A18 SECURITY OF BUOYANCY**

When entering or leaving TdEA N.V. in a loaded condition it is important that the tanker's buoyancy is secured against ingress of water due to damage. Forepeak and foredeep covers and ventilators, cargo, bunker cofferdam and pump room openings, including all ullage plugs must be securely closed during the entire inward or outward passages.

### **A19 MOORING OPERATIONS**

Ships berthing at the inner harbor, outer harbor, HDS and coke berths shall have an adequate supply of heaving lines available for use. The forward springs are usually the first lines ashore. At the Reef berths and New Coke Facility, head, stern and breast lines are taken to the mooring dolphins by mooring boat, therefore the eyes should be lowered to the water edge. Mooring lines should be kept well slacked down after connected to the hook until the mooring boat has run all other lines to the dolphins and cleared the area.

### **A20 SAFETY OF MOORINGS**

All Ships must be securely moored to the satisfaction of the pilot. No cargo or bunker arms or hoses will be connected until the ship is securely moored. Moorings on winch drums shall be securely braked off, self-tensioning devices are not allowed. Moorings of a different character (e.g. wire and fiber) shall not be sent out to the same dolphin or set of hooks/bollards. Moorings shall be monitored and kept taut by the ship's crew and the ship maintained in her correct position and in contact with the berth fendering throughout loading/discharging/ballasting/deballasting or bunkering operations. The berth-loading master is fully authorized to stop operations and disconnect cargo/bunker arms if moorings are seen to require attention or if the ship is not kept in position and in contact with the fendering or if the ship violates any other safe mooring practice.

### **SHIFTING OF VESSELS WHILE ALONGSIDE A BERTH**

If a vessel needs to be shifted alongside a berth at the inner harbor, then a tug and Pilot are required for shifting distances over 30'. For vessels at the Reefberths, one or two tugs and Pilot are required for any distance to be shifted.

### **A21 EMERGENCY TOWING OFF WIRES**



On completion of mooring, each ship at TdEA N.V. shall provide towing wires, of adequate strength and condition, secured to the offside bow and quarter bollards with the eyes run out and maintained at or near the waterline. On ships at any of the finger piers in the inner harbor, the aft emergency towing off wire shall be led through the central aftermost lead.

## **A22 GANGWAYS**

It is the ship's responsibility to provide and maintain a safe means of access between ship and shore. At the inner harbor berths the ship must provide, rig and tend a safe gangway or accommodation ladder, normally abaft amidships. The use of a shore hoist, where available, to assist in putting out or taking in a ship gangway is only allowed if the permission of the berth loading master is given and if a TdEA employee is available to operate the hoist. Ship's personnel are not permitted to operate TdEA's equipment. TdEA will accept no liability for damage caused by the failure of the hoist and will bill the ship's owner for any damage to the ship's gangway. A safety net must always be rigged underneath the gangway/accommodation ladder. Particular attention must be given to providing safe access between the gangway and the ship's deck when the ship is high and the gangway steep. At reef berths, the shore gangway will be monitored and secured to on vessels main deck to prevent gangway movement and subsequent damage. Customs, Immigration and TdEA personnel will refuse to board a ship, which does not have a safe means of access with resulting delays for ship's account.

## **A23 STATE OF READINESS OF SHIPS ALONGSIDE**

No repairs or underwater hull cleaning/inspection etc, which will make the ship unable to move under its own power, may be commenced without the written consent of the Marine Operations Manager's or his authorized deputy. In general, such consent will be refused as, for the safety of the port it is essential that ships maintain their propulsion, steering and other equipment required for unmooring and maneuvering, remaining fully operational throughout their stay alongside. In case where, through Force Majeure, a ship becomes immobilized whilst alongside, the Master must immediately advise the berth loading master and "TdEA" of the facts so that a decision may be made on the advisability of continuing with cargo operations and so that special precautions can be taken.

## **A24 SHIP/SHORE COMMUNICATIONS WHILST ALONGSIDE**

The loading master boarding the ship after docking will place onboard a UHF radio which will be used by the ship's officers for loading, discharging and bunkering operations. This radio will remain on board throughout the ship stay alongside the berth and must be then handed back to the loading master before the ship sails. The designated OMS Channel on this radio is to remain open so that the berth loading master and shore supervisors can contact the ship as necessary. The loading master, Marine ("TdEA") and Oil Movement Control rooms and the Oil Movements & Shipping Shift Supervisor can be contacted on the OMS Channel, and all control over loading can be maintained. The set can also be used to advise the timings relating to shipping activities and product transfer communications between ship and shore. The set must not be used for Agency matters or for communicating with other ships and must be used responsibly. Should the radio be damaged or lost whilst under the care of the ship's Master, the cost of a replacement will be billed to the ship's owner. The ship should call the berth loading master or the Oil Movements & Shipping Shift Supervisor if there is evidence that the battery is getting low or the radio is operating unsatisfactorily.

**A25 FRESH WATER AVAILABILITY**

There is no natural fresh water in Aruba; it is distilled from seawater. Ships planning on replenishing fresh water at TdEA N.V. should make a request through their agent.

**A26 APPOINTMENT OF AGENT – AGENCY SERVICES AVAILABLE**

No ship is allowed to enter TdEA N.V. for loading or discharge unless it has a duly appointed Agent through whom all disbursements and ship's business can be accessed.

**A27 PORT CHARGES**

Marine Service Fees for normal docking and undocking are published and announced regularly to ship owners/agents. These fees are all-inclusive and include wharfage, towage and line handling. They are applicable 24 hours a day, 365 days per year and are based on the vessel's summer deadweight tonnage.

**Wharfage** – If a ship exceeds normal turnaround time due to inefficient ship operations e.g. excessive deballasting, ballasting, cargo discharging times, loading restrictions, excessive tank cleaning alongside, repairs, awaiting crew members, etc., a wharfage fee is levied equivalent to demurrage rate (\$/Day) at published AFRA rates depending on ship's size (SDWT).

**Harbor Boat** – A boat is available on a 24-hours/day basis at advertised rates through TdEA.

## **S SAFETY REGULATIONS AND REQUIREMENTS**

### **S1 ENFORCEMENT OF REGULATIONS**

It is to be expected that the ship's master and crew members will, for their own safety and that of their ship, cooperate in ensuring that there are no violations of the Safety Regulations at TdEA N.V. but if violations do take place and are not immediately rectified on request by TdEA, all cargo, ballast, bunker, tank cleaning and other operations for which a ship is holding a berth will be stopped until the violations are rectified. In these cases a Note of Protest will be served on the Master and the ship's owners and/or Charterers will be advised. The ship may be required to leave the berth if violations are considered to endanger the Terminal's operations. Ships, which persistently have minor violations of these Safety Regulations or fail to correct unsafe conditions, will be refused entry into TdEA N.V. until the Ship's Owner or Charterer guarantees that the violations will cease and unsafe conditions are corrected.

In these cases no liability for demurrage will be accepted by TdEA.

### **S2 SCOPE OF REGULATIONS**

In general, the Safety Regulations applied at TdEA N.V. are in conformity with the recommendations of the International Safety Guide for Oil Tankers and Terminals (ISGOTT) and The Society of International Gas Tanker and Terminal Operators (SIGTTO). In addition, there are safety regulations of a nature, particular to local conditions and requirements.

### **S3 SHIP/SHORE SAFETY CHECKLIST**

The Ship/Shore Safety Checklist used at TdEA N.V. is shown in Appendix 4. It is, in general, based on the ISGOTT checklist. It is TdEA's intent to check every ship as soon as possible after arrival. The checklist should also be used to self examine ship's safety without waiting for TdEA personnel to perform a check.

### **S4 MOORINGS**

See A19.

### **S5 ANCHORS**

See A17. No ship may lay alongside a berth with an anchor on the bottom.

### **S6 EMERGENCY TOWING OFF WIRES ('FIRE WIRES')**

See A21. Fiber ropes are not acceptable as an emergency towing off wire.

**S7 EMERGENCY PILOT LADDER**

As soon as vessels are berthed, each vessel must put a pilot ladder over the offside just forward of the poop and keep the end just above water level throughout their stay alongside, so that in an emergency a pilot could board the ship.

**S8 STATE OF READINESS OF SHIPS ALONGSIDE**

See A23.

**S9 SHIPS FIRE FIGHTING EQUIPMENT**

The ship's fire main should, where practicable, remain fully pressurized and ready for use with fire monitors trained on the cargo manifold area and other vulnerable locations during the entire ship's stay alongside. If a ship is not fitted with fire monitors in the manifold area, hoses with nozzles shall be connected to the fire main and run out forward and aft of the cargo manifold and at other strategic locations such as the pump room top. Where it is not practicable to keep the fire main pressurized, the fire pump shall be ready for immediate use. The position of the ship's international shore connection shall be conspicuously marked. Portable fire extinguishers, preferably of the dry chemical type, shall be placed in the vicinity of the cargo manifold.

**S10 SMOKING**

Smoking is strictly forbidden on the weather decks of ships, tugs, barges, launches, mooring boats or any other craft when within TdEA N.V.. Smoking is strictly forbidden on the berths, roadways, in cars or trucks or any other place within TdEA N.V., and the refinery, including the HDS/Coke and Reef Berth areas smoking is allowed on board ships in places designated by the Master and agreed with TdEA's supervision. Generally these should be confined to locations abaft the cargo tanks and which do not have doors or ports which open directly over the cargo deck. Smoking is strictly prohibited anywhere on tugs, launches, mooring boats, barges and other craft when alongside a tanker. On these small crafts where smoking is allowed (except as above) in an enclosed space a "no smoking outside" notice must be posted on the inside of all doors which open directly onto the weather decks.

**S11 MATCHES AND LIGHTERS**

No matches, mechanical lighters or any other appliance which may produce ignition may be carried by persons engaged in the handling of cargo, hoses/loading arms, bunkers, ballast or the gas freeing of a vessel, or whilst on duty on the weather decks of tankers or on the berth.



**S12 CLOSURE OF DOORS AND PORTS AND TRIMMING OF VENTILATORS**

Before commencing any loading, discharging, ballasting, bunkering, deballasting or gas freeing operations all doors and porthole openings onto the decks forward of the funnel (stack) shall be closed and kept closed. Where these doors have to be used during such operations a screen door shall be fitted inside the main door so that both doors are not open at the same time. Ventilators shall be kept suitably trimmed according to the prevailing conditions.

**S13 AIR CONDITIONING INTAKES**

Air-conditioning intakes shall be closed and the system placed in the recirculation mode of operation to prevent entry of flammable gas. NOTE: Although your ship may not be engaged in operations involving low flash cargoes the ship on the next berth which, in the inner harbor, can be less than 100 feet away may be, and the prevailing wind could bring flammable gases across your ship.

**S14 WINDOW TYPE AIRCONDITIONING UNITS**

The use of window type air conditioning units, unless certified explosion proof or flameproof, is prohibited on any ship within TdEA N.V..

**S15 TANKS LIDS, ULLAGE PORTS, FLAME SCREENS, TANK CLEANING PLATES**

All tank lids and tank cleaning plates shall be securely closed while loading, bunkering, discharging, deballasting and ballasting. A tank cleaning plate may be opened where it is found safe to do so for the purpose of measuring remaining oil, water or sediments at the after section of a cargo tank. Only one plate shall be open at any time and shall be closed immediately after the measuring is completed. Flame screens shall be in place in all ullage openings and ullage ports shall be closed (and secured if ship is inerted) except when sighting, ullaging, sampling, etc. All lids of tanks not gas free must be closed.

**S16 INERT GAS SYSTEMS**

All ships having an inert gas plant (IGP) must, before entry into TdEA N.V., confirm that the IGP is working correctly. It is a TdEA N.V. requirement to maintain positive pressure on all tanks with the oxygen content of the inert gas is less than 8% by volume. On arrival vessels will be asked to depressurize tanks sufficiently to allow up to three ullage ports to be open at any one time for the purpose of gauging, sampling, water finding, temperature reading, tank inspection, etc. Ullage ports must be re-secured before cargo or ballast handling is commenced. During discharge of cargo or ballast the IGP must be capable of producing sufficient inert gas of 8% or less oxygen quality. Under no circumstances should cargo tanks be subject to a vacuum. If necessary the discharge rate must be regulated accordingly. IF THE IGP IS NOT OPERABLE, DISCHARGE WILL NOT BE ALLOWED AND IF DURING DISCHARGE OF CARGO OR BALLAST THE IGP FAILS, THE DISCHARGE MUST BE STOPPED UNTIL THE PLANT IS OPERATIONAL.

When loading or ballasting into an inerted tank the inert gas displaced must be vented through the ships vent system and not the ullage plugs. The ullage plugs may only be opened during loading, discharging or ballasting for sighting, ullaging and sampling and personnel are warned to keep upwind when carrying out these duties. If tanks, after gas freeing have to be entered for inspection, the inspectors must not enter the tanks until they are tested for oxygen content in addition to the normal test for hydrocarbons and an enclosed space entry permit is issued by the vessel.

### **S17 LOADING OVERALL**

Loading overall (through an open tank hatch or ullage plug) of any product is prohibited at TdEA N.V..

### **S18 STATIC ELECTRICITY PRECAUTIONS**

All ships loading static accumulator products having a flashpoint of 100°F and higher must be gas free, in those tanks receiving the product, to below 40% of the lower explosive (or flammable) limit. See C11 for further information. All terminal cargo and bunker arms have insulating flanges at the triple swivel assemblies, which are connected to the ship. All terminal berths are cathodically protected.

### **S19 OBO SHIPS – PRECAUTIONS IN HANDLING CARGO AND BALLAST**

See C12.

### **S20 TUGS, BOATS AND OTHER CRAFTS GOING ALONGSIDE SHIPS AT BERTH**

Except in an emergency or when ordered to assist in berthing or unberthing or maintaining a ship alongside, tugs are forbidden to lie alongside any ship at a berth within TdEA N.V.. When a tug is alongside to assist, all tank lids, ullage plugs and tank cleaning openings must be securely closed and must not be opened until the tug is clear.

No other boat, launch, barge or other craft may lie alongside the cargo tank deck of any ship which is loading or discharging of such cargo unless all such operations are stopped and all deck openings securely closed. Where possible, stores, lube oils and other material must be taken on board from a position abaft the funnel (stack).

### **S21 BOATS AND OTHER SMALL CRAFTS SERVICING TANKERS AT TDEA'S MARINE TERMINAL**

All small crafts including storing boats, hull cleaning boats and other used to service tankers at TdEA N.V. must be properly equipped for safe operation in vapor laden atmosphere capable of ignition, shall have adequate and efficient fire fighting appliances, and be inspected and approved by TdEA Operations Manager.

## **S22 DELIVERY OF STORES OVER TDEA'S BERTHS**

The normal method of storing ships lying alongside TdEA's berths will be by stores launch. Minor amounts of stores defined as "Dry goods (no alcoholic or soft drinks) of a harmless nature in stout containers which can be safely hand carried up a ship's gangway with a total quantity of not more than 250 kilos or 4 cubic meters", may be allowed to be put on board via the berth but the supplier must first obtain a written permit from the Oil Movement Shift Supervisor. A shore crane will not be available for storing. The supplier will be responsible for clearing away any debris on the berth caused by storing operation.

## **S23 REPAIRS AND OTHER WORK, STORING BY LAUNCH, HULL CLEANING ETC. ON SHIPS AT TDEA ARUBA MARINE TERMINAL – WORK PERMITS**

All work performed on a ship alongside the TdEA N.V. by shore contractors must be with the approval of the Marine Operations Manager. Work requiring a cold work permit (for definition of cold work see Appendix 5) includes any cold work to be performed on the weather decks or hull of a ship alongside a berth at TdEA N.V.. Work performed by divers, including hull cleaning, and any work requiring a boat or a barge to lie alongside, including storing and lube oil delivery requires a work permit to be issued prior to commencement to work. Hull cleaning by divers or machinery is not permitted when a ship is lying at an inner harbor berth or at the HDS, Coke and Reef Berths. Any diver working on the hull, rudder or propeller of a ship whilst alongside a berth must be approved by Marine Operations Manager. All work requiring hot work (for definition of hot work see Appendix 5), whether to be performed by Contractors or ship's crew, on the weather decks or hull of ships alongside a berth at TdEA N.V., must be approved by the Marine Operations Manager and done under the conditions of a hot work permit issued by the Operations Shift Supervisor. These permits are valid for 8 hours only and must be renewed if work continues beyond an 8-hour period.

## **S24 CLIMATIC CONDITIONS**

### **Electrical Storms**

Severe electrical storms are rare in Aruba but should one pass in the near vicinity then all cargo operations, ballasting into non gas-free tanks, inert gas purging, tank cleaning and gas freeing shall be suspended and all tank openings and vent line valves closed until the storm has passed.

### **Heavy Rain Storms**

Should a heavy rain storm, usually of short duration, occur during the topping off operations in loading cargo or bunkers, the berth loading master should be asked to stop the loading until the heavy rain has stopped.

### **Strong Winds**

When mean wind speeds exceed 30 knots on the terminal anemometer, ships will, depending on the wind direction and general weather synopsis, be alerted that cargo/deballasting/bunker operations may have to be suspended and arms disconnected.

The terminal has the responsibility of determining when wind conditions are reaching the limit of the design criteria for connection or disconnection of the cargo arms.

### **Hurricanes**

While no hurricane has passed over Aruba within living memory they frequently pass along tracks which could, and sometimes do, come close enough to Aruba to affect the weather and sea conditions. Ships will be alerted when this situation might arise and, based on the reported proximity and severity of the storm may be required to :

- Suspend loading/discharging/deballasting operation and disconnect arms/hoses.
- Keep engines and other equipment in a state of immediate readiness should it be necessary to vacate the harbor.
- Ships at anchor off the reef will be requested to leave that anchorage.

## **S25 CHIPPING, SCRAPING AND PAINTING**

Chipping and scraping is not permitted on the weather decks or hulls of ships alongside a berth at TdEA N.V.. Painting of ship's hulls from the deck or fendering of a berth or from a position, which can cause paint to fall onto the berth or its fendering, is not permitted. The painting of jetty fittings, pipelines, decks, etc., by ship's crew is strictly forbidden and TdEA will bill the offending ship's owner(s) with the cost of removing of such disfiguration.

## **S26 BLOWING BOILER TUBES, HEAVY SMOKE**

Ship's boiler tubes must not be blown whilst within TdEA N.V. nor must heavy smoke from the funnel (stack) be allowed to persist.

## **S27 SOUNDING OF SHIP'S WHISTLES, SIRENS ETC.**

Except in an emergency, ship's whistles, sirens etc., must not be used whilst a ship is moored alongside a berth at TdEA N.V. (see F2 for emergency signals).

**S28 REFUSE, GARBAGE, OVERBOARD DISCHARGES OF WATER ETC.**

No refuse or garbage, old wires etc., shall be thrown overboard, onto the berth or into the sea whilst within the TdEA N.V.. For garbage removal proper arrangements should be made through Agents in order to have garbage picked up and disposed properly. Garbage may not be disembarked from vessel before garbage removal service has arrived to pick it up. Promptly after arrival alongside, boards or other means of preventing water, etc. from flooding the berth deck, shall be fitted over all outlets which are, or will be, above berth deck level. When receiving stores, lube oil etc, from launches care should be taken to prevent water etc, from pouring into the launch.

**S29 CREW ACCESS BETWEEN SHIP AND REFINERY GATES**

The crewmembers of ships at berths in the inner harbor are allowed to walk on clearly defined routes between ship and the Main Gate. The crewmembers of ships at the HDS/Coke and Reef Berths are not allowed to walk between ship and the Main Gate and Shipmasters must make transportation arrangements through their Agent. (Costs for ship's account). Special permission is necessary for crewmembers to pass through any other gate than the Refinery Main Gate. The agent will present vessels with a letter to this effect.

**S30 PASSES, CREWLISTS**

According to I.S.P.S. Regulation a crew list must be submitted before arrival to TdEA N.V. and to Security by the Ship's Agent. All crewmembers on shore leave must carry valid means of identification so that they can be checked off against their ship's crew list at the Main Gate.

Ship's Agent must make arrangements for crewmembers joining a ship at TdEA N.V..

**S31 INTOXICATED PERSONS**

No person who appears to be in an intoxicated condition or under the influence of drugs will be allowed within TdEA N.V. or Refinery. If a crewmember in such a condition arrives at the Refinery Main Gate he will be refused permission to enter until the Master or officer in charge of his ship provides an escort to supervise him between the gate and ship.

**S32 VEHICULAR TRAFFIC**

Vehicles which have been permitted to enter TdEA N.V. shall obey all traffic signs and barriers, be driven within the speed limit indicated on the road signs (maximum 30 km/hr) and shall not be parked on yellow lines, near fire hydrants or in any way as to cause an obstruction. Vehicles and their contents enter TdEA N.V. at their owner's or driver's risk.

### **S33 SHIP VISITING**

In general, the visiting of ships berthed at TdEA N.V. by other than bona fide crew members, Owner's representatives and contractors having business on board (not seeking business) is not allowed or encouraged. In special cases the Master may make arrangements with the Oil Movements and Marine Operations Managers or higher TdEA Management for others to visit his ship. Agents are not authorized to make these arrangements. TdEA supervision and the berth loading master will visit the ship from time to time in connection with their business but in no circumstances should any TdEA representative visiting a ship be offered alcoholic beverages or gifts.

## **P POLLUTION AVOIDANCE**

### **P1 POLLUTION EXPERIENCE AT TDEA ARUBA MARINE TERMINAL –**

#### Reporting Oil Spills

Experience at TdEA N.V. has shown that the major causes of pollution by ships have been due to the following:

1. Overflow of cargo, bunkers and/or ballast during loading, bunkering or ballasting.
2. Discharge of dirty ballast/bilge water over side.
3. Leakage of oil through sea valves at commencement of ballasting.
4. Failure of flanges and joints in manifold and loading/discharge pipe work.
5. Overflow of cargo from tanks during discharge (open drop line valves, change of trim, slop tank overflow).
6. Hydraulic pipeline rupture on main deck of vessels fitted with Framo Deep well pumps.

Oil spills, whether pollution of the harbor occurs or not, must be reported to TdEA Supervision. In order to prevent or minimize pollution the following requirements are in force at TdEA N.V..

### **P2 POLLUTION AVOIDANCE CHECKLIST**

The checklist shown in Appendix 6 should be used by ship's officers to self-examine their ship for pollution control.

### **P3 SCUPPERS**

Scuppers must always be closed and made oil tight before operations commence. Those ships, which have wooden scupper plugs, must have the plugs cemented over. For vessels engaged in LPG transfers scuppers must always be left open.

### **P4 WATERFREEING DECKS**

All surplus rainwater and water spilling on deck from tank cleaning/ventilating operations must be drained off periodically and scupper plugs replaced immediately after the water has been run off.

**P5 UNUSED CARGO/BUNKER CONNECTIONS**

All unused cargo and bunker connections shall be closed and blanked off.

**P6 OVERBOARD VALVES AND SEA VALVES**

All overboard valves and sea valves not being used shall be closed and lashed or sealed.

Overboard discharge lines, which have a swing-blind arrangement, shall be blinded.

**P7 DRIP PANS OR TRAYS**

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

**P8 OIL ABSORBING MATERIAL**

The ship shall keep an adequate supply of sawdust or other oil absorbing material at or near the manifold.

**P9 ADEQUATE DECK WATCH, COMMUNICATIONS WITH SHORE**

The ship shall have an adequate deck watch during all cargo, bunkering and ballasting operations. The communications system between ship and shore shall be tested ok.

**P10 MAXIMUM ALLOWABLE PRESSURE AT MANIFOLD**

Never exceed the maximum allowable backpressure as indicated below at ship's rail, and make sure the loading rate is fully agreed.

Crude and oil products	150 p.s.i.
Butane	175 p.s.i.
Sulphuric Acid & Caustic Soda	100 p.s.i.

**P11 TOPPING OFF OPERATIONS**

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

**P12 CHECKS ON TANKS AFTER TOPPING OFF**

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



**P13 DRAINING ARMS/HOSES**

Always allow sufficient ullage in final tanks to accept the draining of shore loading arms or hoses. This requirement also applies to bunker fuel tanks.

LPG vessels will be required to hot gas shore hose after completion of cargo operations, terminal cannot assist in blowing back hose with air or nitrogen.

**P14 BALLASTING THROUGH CARGO SYSTEM, OPENING SEA VALVES**

When commencing ballast through the cargo system ensure that oil is not allowed to flow out through the sea valves. Do not open the sea suction valve until it is sure the pumps are turning; beware of the pump cutting out due to sudden load.

**P15 ULLAGE OF BALLAST TANKS**

When ballasting into cargo tanks (and into permanent ballast spaces if these have a rust inhibitor or oil in them) the ullage in the tanks concerned must be monitored at all times to prevent overflow.

P.

**P16 CLEAN UP OPERATIONS, USE OF TDEA'S TUGS, COST OF CLEAN UP**

If the spillage occurs all cargo, bunker and ballast operations must be stopped and full attention given to cleaning up and minimizing pollution of the harbor. TdEA's tugs have oil dispersant spraying equipment and will be called to clean up any pollution of the harbor or surrounding sea. The cost of the clean up of pollution emanating from a ship will be billed to that ship.

## **F FIRE AND FIRE EMERGENCIES**

### **F1 FIRE ALARM**

The Terminal fire alarm is situated on the top of the Oil Movements Control Center at the shore end of Finger Pier 3 North. The general fire alarm, which will be sounded in the event of a fire involving TdEA N.V. or any ship or other craft at the terminal, will be 8 short blasts on the fire siren repeated 3 times. The terminal fire alarm will be tested on the first Monday of each month at 1100 Hrs. All ships in harbor at the time will be notified beforehand.

### **F2 ACTION REQUIRED ON SOUNDING OF TERMINAL FIRE ALARMS**

On hearing the terminal fire alarm or being otherwise advised of a fire at the terminal, a ship not involved in the fire should shutdown all cargo, bunker and ballast operations, bring fire fighting equipment to a state of readiness and make engines, steering gear and unmooring equipment ready for immediate use. Depending on the location and seriousness of the fire, the terminal may decide to drain the cargo and/or bunker arms of hoses connected to your ship and disconnect. Unless in extreme emergency, the ship's crew should not attempt to disconnect the arms or hoses without the presence of a TdEA representative. The ship's crew should remain in readiness to sail or act as requested.

### **F3 ACTION TO BE TAKEN BY SHIP(S) INVOLVED IN FIRE OR EXPLOSION**

#### **a) Fire or Explosion on Ship**

Stop all cargo/bunkering/deballasting operations and raise the alarm by sounding a series of long blasts of not less than 10 seconds each on the ship's whistle or siren and call "TdEA" on OMS working Channel or VHF Ch 16, using the words "Emergency Fire" several times and making sure that the ship's name and berth are identified, the location and severity of fire given. Having raised the alarm, responsibility for fighting the fire on board ship will rest with the Master and ship's crew. Firefighting tugs will be sent to the ship on fire and can be contacted on VHF Channel 08. As soon as possible TdEA Operations Manager, Terminal Security Supervisor and Terminal Emergency Response Leader will board the ship, contact the Master or Officer in charge and consult on how best the shore firefighting organization can assist in fighting the fire. If possible, any cargo and bunker arms or hoses connected will be drained and disconnected. Depending on the circumstances a decision may be made to remove the ship from the harbor. A pilot ladder should be over the offside so that a local pilot can board from a launch or tug should access via the berth being impossible.

**b) Fire or Explosion on Berth**

Should a fire or explosion occur on a berth the ships at berth must immediately report the incident to "TdEA" by the radio placed onboard by the terminal representative and remain in contact, shut down all cargo/bunkering/deballasting operations and drain all arms or hoses ready for disconnecting. The ship's firemain should be pressurized and water fog applied in strategic places. TdEA's Terminal Emergency Response Leader or other supervisor will contact the ship(s) as soon as possible in order to arrange a coordinated firefighting effort where this is possible. The ship's engines, steering gear and unmooring equipment must be brought to a state of immediate readiness. TdEA's forces will drain the shore side of the arms or hoses and disconnect but where this proves impossible the ship's crew should be ready to disconnect realizing that unless they are properly drained, arms will probably fall to the deck on being disconnected. Where this happens, if possible, leave it free on deck. In order to remove the ship(s) to a place of safety and so that the fire on the berth can be fought more easily, the decision will probably be made to sail the ship or ships from that pier. Ships should have a pilot ladder over the offside so that a local pilot can board from a launch or tug and the ship's crew should take tugs' lines and go to mooring stations as soon as the pilot is on board.

## C CARGO, BUNKERS AND BALLAST OPERATIONS

### C1 CLASSIFICATION OF PETROLEUM

For the purpose of these regulations the following classifications of petroleum are established at TdEA N.V.:

<b>CLEAN PRODUCTS:</b>	Gasoline's, Kerosene's, Turbo Fuels, Gas Oil, Heating Oils, and Light Diesel Oils. The ships which carry these products are designated "Clean Ships".
<b>DIRTY PRODUCTS:</b>	All grades of Fuel Oil, Asphalt, Vacuum Gas Oils, and Cutter Stock. The ships which carry these products are designated "Dirty Ships".
<b>CRUDE OILS:</b>	All grades of crude oil including 'Spiked' Crude. 'Sour Crudes' are those crudes, which contain appreciable amounts of hydrogen sulphide and/or mercaptan. All Persian Gulf Crudes are classified as 'Sour Crudes'. Ships, which carry crude oils are, designated "Crude Ships". "Crude Ships" and "Dirty Ships" may be interchangeable.
<b>SPECIALTY PRODUCTS:</b>	Butane Sulphuric Acid, Naphthenic Acid, Caustic Soda, Coke, Sulfur, Spent Caustic, TEL, Anti Icing. Ships which carry these products are designated 'gas ships', "acid ships", "napacid ships" etc., as the case may be.
<b>LOW FLASH PETROLEUM:</b>	Flash point below 60°C (140°F) as determined by the closed up method of testing.
<b>HIGH FLASH PETROLEUM:</b>	Flash point of 60°C (140°F) or above as determined by the closed cup method of testing.

### C2 PRE-ARRIVAL INFORMATION REQUIRED

All ships scheduled to load or discharge at TdEA N.V. should, at least 48 hours prior to arrival, radio, fax, email or telex the pre-arrival questionnaire to TdEA, attention Marine Dispatcher through vessels agent. If passage from last port is less than 24 hours this information should be transmitted to "TdEA" on VHF as soon as in range. (See Annex)

### **C3 BUNKER REQUIREMENTS**

It is essential that ship's Master include their bunker requirements in their pre arrival questionnaire through agents. For TdEA to be able to supply bunkers a bunker nomination must have been received from TdEA Marketing & Sales.

### **C4 MANIFOLD REQUIREMENTS**

Ships whose cargo and bunker manifolds conform to the OCIMF "Standards for Tanker Manifolds and Associated Equipment" will have no difficulty at TdEA N.V.. Any ship, which has a manifold constructed of other than Steel or has, valves outboard of the supporting stool must advise "TdEA" by VHF prior arrival so that the manifold can be examined by TdEA Supervision and suitable precautions taken before and during connecting of arms. Basic requirements for manifolds at TdEA's Terminal are:

Ships for inner harbor (where ship may be portside or starboard side to berth) – all clean, dirty and crude ships of up to 100 KDWT

- Cargo manifold 10 x 10" ASA made of steel.
- Bunker manifold 1 x 6" ASA made of steel situated abaft of cargo connections.
- LPG products are handled with a 6" hose, no facility for vapor return
- Distance from rail minimum 8 feet, maximum 15 feet.
- All valves to be inboard of support stool or otherwise supported.
- Distance apart of manifolds, including bunkers, flange edge to flange edge minimum 36 inches, maximum 60 inches.
- If spill tank under manifold extends more than 30 inches outboard of connecting flange the arm jacks will have to land on it.
- Minimum height of lower edge of flange above spill tank (where fitted, or above deck if not fitted) 24 inches, maximum height 50 inches.
- If ship's connecting flanges are not made of steel maximum allowable unsupported cantilever length of 24" will apply. Terminal supervision should be consulted.

### **C5 DEBALLASTING**

Ships must not commence de-ballasting over side until the clean ballast has been inspected by a TdEA representative. If any oil is seen on top of the ballast, the TdEA representative will advise as to what quantity of water may be discharged over side and what quantity has to be discharged ashore.

Generally, clean ballast which has any oil floating on it, should not be discharged overboard after the tops of the suction pipelines in the tanks are uncovered. The responsibility for avoiding pollution during discharge of clean ballast over side remains with the ship. The shore de-ballasting system has a check valve in every lateral to prevent flow back. The ship should advise the berth loading master and "TdEA" at least 30 minutes before completion of de-ballasting so that tank inspection can be arranged without delay.

## **C6 TANKCLEANING, GAS-FREEING ALONGSIDE**

Permission to tank clean and/or gas-free alongside a berth must be obtained from the Oil Movements Manager or his authorized deputy before commencing operations. Generally, this will not be refused unless, in the opinion of the Oil Movements Superintendent:

1. The weather or other conditions are considered unsatisfactory.
2. The equipment being used, the methods employed the experience or attitude of the officers and crewmembers involved are considered unsafe.
3. The length of time required to tank clean or gas-free is excessive.
4. The berth is needed for loading or discharging another ship. (See A6 re-vacating berth).

No electrical equipment such as lighting and ventilating fans may be used unless certified flame or explosion-proof and in good physical condition. All tank cleaning must be performed under the personal supervision of a senior ship's officer who must always be in the vicinity of the tank cleaning operations.

## **C7 INERT GAS SYSTEM**

See S16. It is important that inerted ships do not attempt to discharge cargo or ballast if their inert gas system is not functional or able to keep positive pressure on all tanks with less than 8% oxygen.

## **C8 TANK PREPARATION FOR LOADING AT TDEA ARUBA MARINE TERMINAL**

Unless otherwise specified, the ship's tank preparation for cargoes to be loaded at TdEA N.V. shall conform to the Tank Cleaning Guidance Chart contained in Appendix 9.

## **C9 TANK INSPECTION**

### 1. Before loading clean cargoes

Tanks will always be inspected with lids open except those designated for low flash cargoes and which may not therefore, be gas-free. Tanks to be loaded with Turbo Fuel or kerosene will always be entered (unless last cargo in tank was turbo fuel or kerosene and has not carried ballast) and must therefore be gas-free for entry. The inspector may need to witness an explosimeter and oxygen analyzer reading of any tank before entering. A ship's officer must always be present when tanks are being inspected. Tanks for clean products must have main and stripping valves in each tank open during inspection. Ships scheduled to load clean cargoes, particularly Turbo Fuel, Kerosene or Heating Oil may be required to anchor off the reef for inspection prior to berthing. When inspection is done from the tank lid and the entire tank cannot be seen clearly, the inspector may ask for some tank cleaning plates to be removed. Ship's manifold valves on both sides of the ship will be required to be opened and the pipelines visually inspected. Where draining of lines is done into the pump room bilge's the inspector may ask to see the drain valves or plugs opened and also see the drain cocks on the pump opened.

2. Before loading dirty products or crude oil

Tanks will normally be inspected with tank lids closed, however, in cases of doubt the inspector may ask for the tank lids and/or the tank cleaning plates to be opened.

3. On completion of discharge

All measurable quantities of the previous cargo will be computed and a ROB quantity computed (see cargo measurement – C18). This will be included in the ullage report. A Note of Protest will be issued if the ship cannot reduce the ROB quantity and it is considered excessive.

**C10 DRY CERTIFICATES**

TdEA Supervisors will not sign dry certificates on presentation but they are instructed to endorse them with observations of any free water or previous cargo seen and to the effect that the contents of the pipelines are unknown. TdEA does not accept any liability as to the actual condition of the cargo tanks inspected.

**C11 STATIC ELECTRICITY PRECAUTIONS**

For all static accumulator products having a flashpoint of over 100°F. (Kerosene, Turbo Fuel, Gas Oil and Heating Oil) tanks shall be gas-freed to below 40% of the LEL (LFL) before loading. No other static electricity precautions will therefore be necessary unless these products are being loaded at a temperature near or above their flashpoints when loading rates will be restricted until the ship's tank inlets are covered and special precautions in ullaging, sampling, taking temperatures will be enforced. For all static accumulator products having a flashpoint of less than 100°F. (Naphtha's, Gasoline's) the main precaution to be taken is that metallic dipping, ullaging and sampling equipment shall be bonded and firmly grounded (earthed) to the structure of the ship before its introduction into a tank and remain grounded until after its removal.

**C12 OBO SHIPS – PRECAUTIONS IN CARGO AND BALLAST HANDLING**

Due to the problem of the effect of large free surfaces on the stability of OBOs there should only be a minimum number of slack tanks during loading, discharging or ballasting maintaining positive stability at all times, same will be governed by vessels stability booklet and conditions. Generally, when ballast and cargo are being handled simultaneously the loading rate shall be regulated accordingly. If a ship's master can demonstrate that the ship's stability is adequate without such stringent precautions he should consult with TdEA supervision on this and all free surfaces problems. If a list develops during loading or discharging, operations will be stopped and arms disconnected and remain so until the free surface in the ship has been reduced and the list corrected.

### **C13 COMMENCEMENT OF LOADING**

On being advised by TdEA's tank inspector that the ship's tanks are satisfactory to load, all tank lids and tank cleaning plates must be closed and secured, unused manifold connections blanked off and the ship's system, with the exception of the manifold valves, lined up for loading. Flame screens must be in place in each ullage port. When the shore indicates it is ready to load, open the appropriate manifold valves and advise the shore that you are ready to load by gravity. If loading more than one grade, start each grade off separately. Do not ask for a pump to be put on until you are sure the cargo is flowing into the intended tanks. Agree with the berth loading master on the number of pumps to be put on and on the standby time he requires for pumps to be cut out (for emergency stopping of pumps see C15).

Communications with the shore will normally be by the radio placed onboard the vessel by the loading Master. Vessels are cautioned against release of tank pressure into the atmosphere during loading.

### **C14 TOPPING OFF**

If you require a reduction in loading rate for topping off arrange this with the berth - loading master.

### **C15 EMERGENCY STOPPING OF PUMPS**

To stop shore pumps in an emergency use the UHF radio provided by the terminal making sure to identify ship's name and berth before requesting 'stop pumps – emergency', repeat several times. All ships at the terminal are on the same UHF channel and unless you identify your ship's name and berth the pump controller will not know which ship is requesting a stop.

### **C16 DISCHARGING**

All deck openings shall be sealed and tanks under positive IG pressure. On non-inerted ships flame screens must be in place in all ullage holes. Open manifold valves and start pumps only after you have been told by the berth loading master that the shore is all lined up, open and ready. Maintain continuous watch on the radio provided by the terminal, as this will be the means that the shore will use to request you to stop pumps in an emergency. If, for any reasons, you temporarily stop discharging or drastically reduce the discharging rate, you must advise the berth-loading master.

### **C17 LOADING OF BUNKERS**

When possible, bunkers will be loaded simultaneously with cargo operations. The ship's officer in charge of bunkering should contact the berth loading master as soon as possible after arrival alongside to arrange a convenient time for bunkering, topping off requirements and any requirements for samples and/or sighting bunker meter readings.



Generally, bunkers are loaded through meters and a ship's representative is invited to witness opening and closing readings. Where it is not possible to load bunkers through a meter, shore computer and hand gauged quantities will be used or, in case of small ships taking small quantities, a ship's inspection or 'bunker survey' will be carried out by a TdEA representative. Ship's officers are invited to witness gauging of shore tanks upon start and completion of bunkering if meters are not used.

## **C18 CARGO MEASUREMENT**

The accurate measurement of cargo discharged or loaded at TdEA N.V. is essential to the Company's business. Contract Inspectors are engaged to measure each cargo discharged or loaded and ship's officers are requested to give cooperation to these inspectors to take the necessary measurements and samples. Inerted ships may need to depressurize the cargo tanks to the extent that up to 3 ullage plugs can be opened at any one time for hand gauging, sampling and inspection. All tanks will be hand ullaged/dipped, temperatures and samples will be taken and water finding done by the contract inspectors who will require to be advised of the reference calibration tables to compute the cargo loaded or to be discharged. A ship's officer must witness the taking of ullages and temperatures etc. Vessels are required to prove and provide certificates of calibration and dates of tests carried out on their gauging equipment to the cargo inspector.

Vessel Experience Factors are used by TdEA in computing ship's cargo quantities. Where slops from a previous cargo are retained on board they will be measured and, unless commingled, with TdEA's agreement with incoming cargo, again after completion of loading.

In cases of discrepancies of over 0.5% (without VEF being applied) and 0.3 % (with VEF applied) between the computed ship's cargo loaded or discharged and the shore computed quantities the ship will in the case of loaded cargoes, be held at berth or anchorage for re-ullaging and examination until the reason for the discrepancy is discovered or some other agreement with the cargo owner is reached. Particular attention should be given to ensure that the ship's pipeline system used during the loading is full on completion of loading or, if drained into tanks, what proportion is drained. It is helpful if the capacity of these lines is known. In the case of discharged cargoes where the discrepancy between ships and shore computed cargo quantities is greater than 0.5% (without VEF being applied) and 0.3 % (with VEF applied), the ship will be examined and re-dipped. Ship's officers must calculate their cargo quantity independently from inspectors.

It is emphasized that the ship should not start ballasting into cargo compartments during or on completion of discharging unless authorized to do so by a TdEA representative (not the contract inspector).

ROB quantities will be computed from dips of the wedges of oil remaining in each tank. Trim correction will not be applied when the liquid does not entirely cover the bottom of the tank. If available, wedge tables will be used. In cases of large discrepancies between ship and shore quantities, the quantity of oil floating on the top of ballast taken into cargo tanks might be measured to determine a more accurate ROB. A ship's officer will be required to sign for the quantity computed as ROB "without" correction for trim, the actual quantity ROB will be agreed upon later. A Note of Protest will be served on a ship, which has an excessive pumpable ROB, and a claim filed.

In cases of large ship/shore discrepancies and/or cargo contamination a ship's master may wish to appoint an independent inspector or utilize the services of P&I.

### **C19 LOGGING TIMES OF OPERATIONS**

The berth-loading master keeps a log of events during your ship's stay alongside. As this will be compared with the ship's port log before the latter is signed on behalf of the terminal, it will save unnecessary differences if the ship will cross-check with the berth loading master times of stopping and starting all cargo, bunker and ballast operations and reasons for delay whether caused by ship or shore. This information exchange may be carried out by use of the UHF radio put on board your ship, calling berth number from ship (name) to raise the berth-loading master.

Ship's officers on duty are not required to leave their ship for this information exchange.

### **C20 LOADING OF BULK SULPHUR**

Bulk sulphur is loaded at TdEA N.V. only at the HDS berth, east of the inner harbor. The sulphur is loaded at an average rate of about 150mt/hour by conveyor belt into a telescoping chute or spout. The maximum height to which the chute end can be raised is 26 feet above water line. The swivel center of the chute is fixed and therefore to load different holds the ship will have to be shifted along the berth by means of warping with the assistance of tugs if necessary.

Ships are normally berthed starboard side to berth so that the prevailing wind will carry the sulphur dust away from the ship's accommodations; therefore ships have to be swung before berthing. As the HDS has a tight turning area of about 1000 feet diameter and is exposed to the prevailing wind, ships should arrive with ample ballast on board. Tugs are made fast alongside port side and ship should ensure that towing bits of adequate strength are available and clear of obstructions. If they are not, this should be drawn to the attention of the pilot before entering the HDS channel. Ships should arrive with holds clean and dry. Moorings are taken ashore by heaving line and hand hauled.

On completion of mooring, ship is to provide gangway and its type and location should bear in mind that ship will have to shift up to a distance of that between its forward and after holds to be loaded. Derricks/Booms/Cranes must be swung outboard of the port side and all rigging, aerials etc., which can obstruct the loading gear removal.

It is the ship's responsibility to provide its crew with goggles and respirators for use on those parts of the ship exposed to sulphur dust. The eyes and throat will be badly affected if these are not worn.

Operations are performed during day and night, weekends and holidays. TdEA can only accept ships to load sulphur, which are self-trimming or can be, spout trimmed as a maximum.

Hand trimming is not allowed on account of men's safety and hygiene and ships, which cannot effectively be trimmed without hand trimming, should not be assigned to load at TdEA's Terminal.

The measurement of bulk sulphur loaded at TdEA N.V. is carried out by contract inspectors who will need the cooperation of the ships' officers for information on quantities of ballast and bunkers, boiler and drinking water on board before commencement of loading and at various stages of loading etc. Draft surveys will be carried out at the end of each load or during loading operations, if necessary.

## **C21 SHIP TO SHIP TRANSFERS AT DOCK**

When it becomes necessary to transfer cargo directly from one ship to another via headers and pipelines it is essential that a proper communications system is set up between the two ships so that the receiving ship can regulate the flow it is receiving and stop it when necessary. Because of language and radio channel difficulties between ships, TdEA will set up a communications system, stationing on each ship a loading master with a radio on a special frequency which cannot be interrupted. These will remain during the entire transfer operation.

## **C22 LOADING PETCOKE**

Petcoke is loaded at the TdEA N.V. only at the Petcoke Berth, East of the inner harbor. The Petcoke is loaded at an average rate of about 1000MT/hour by a telescoping ship loader. The maximum ship loader reach is 95 feet.

Ships are normally berthed starboard side to so that the prevailing wind will carry the Petcoke dust away from the ship's accommodations; therefore, ships have to be swung before berthing. Tugs are made fast alongside port side and ship should ensure that towing bits of adequate strength are available and clear of obstructions. If they are not, this should be drawn to the attention of the pilot before entering the HDS channel. Moorings are taken ashore by a mooring boat.

On completion of mooring, ship will be provided with a shore gangway.  
Derricks/Booms/Cranes must be swung outboard of the port side and all rigging, aerials etc. which can obstruct the loading gear.

It is the ship's responsibility to provide its crew with goggles and respirators for use on those parts of the ship exposed to Petcoke dust.

Loading operations are normally carried out day and night, weekends and holidays. TdEA can only accept ships to load Petcoke, which are self-trimming or can be, spout trimmed as a maximum. Hand trimming is not allowed on account of men's safety and hygiene and ships, which cannot effectively be trimmed without hand trimming, should not be assigned to load at TdEA's Terminal, Aruba.

The measurement of bulk Petcoke loaded at TdEA N.V. is carried out by contract inspectors who will need the cooperation of the ships' officers for information on quantities of ballast and bunkers, boiler and drinking water on board before commencement of loading and at various stages of loading.

**Terminal Di Energia Aruba N.V.**  
**APPENDIX 3**

**BERTH CAPABILITY  
 IN SAN NICOLAS INNER HARBOR**

SHIP DIMENSIONS	FINGER PIER					
	#1-S	#1-N	#2-S	#2-N	#3-S	#3-N
MAX LENGTH – FT.	745	740	800	750	900	850
MAX DRAFT – FT.	38	38	40	40	40	40
MAX B.C.M. – FT.	376	350	375	360	450	397
APPROX. MAX S.K.D.W.T.	50	50	60	75	90	80
MAX BEAM FOR ENTRANCE. 135 FT.						

Note: Two vessels cannot be alongside Finger Pier #1-N and Finger Pier #2-S at the same time unless one of them has a beam of 55 feet or less.

OUTER HARBOUR		
	Reef Berth 1	Reef Berth 2
MAX LENGTH – FT.	Unlimited	Unlimited
MAX DRAFT – FT.	75	105
MIN B.C.M. – FT.	Unlimited	Unlimited
APPROX. MAX S.D.W.T.	300,000	Unl
MIN PBL FT	220	220

HDS & PETCOKE BERTHS		
	HDS Berth	Coke Berth
MAX LENGTH –FT.	700	800
MAX DRAFT – FT.	31.50	41
APPROX. MAX S.D.W.T.	50000	75000

**APPENDIX 3**
**CAPABILITY OF BERTHS TO LOAD / DISCHARGE PRODUCTS**

<b>INNER HARBOUR</b>						
<b>PRODUCT</b>	<b>#1-S</b>	<b>#1-N</b>	<b>#2-S</b>	<b>#2-N</b>	<b>#3-S</b>	<b>#3-N</b>
HVY SR. RUN	X	X	X	X	X	X
LT. ST. RUN	X	X	X	X	X	X
KERO/JET A – 1	X		X	X	X	X
GAS OIL / #2 DIESEL	X	X	X	X	X	X
#6 FUEL OIL		X	X	X	X	X
ASPHALT					X	X
BUNKER FUEL	X	X	X	X	X	X
DISCHARGE						
CUTTERSTOCK		X	X	X		X
50 Be' CAUSTIC	X					
PROPANE / BUTANE			X	X	X	X
SULPHURIC ACID						X
DISCHARGE GASOLINE			X	X	X	X
DISCHARGE						
BALLAST/SLOP	X	X	X	X	X	X

<b>OUTER HARBOUR</b>		
<b>PRODUCT</b>	<b>REEF BERTH 1</b>	<b>REEF BERTH 2</b>
CRUDE OIL	X	X
VGO	X	X
Fuel Oil	X	X
L SULPHUR DIESEL	X	

## TDEA'S SHIP/SHORE SAFETY CHECKLIST Appendix 4

Ship's name: \_\_\_\_\_

Date/Time of Arrival : \_\_\_\_\_

Berth Name/Number: \_\_\_\_\_

Date/Time Hose Connected: \_\_\_\_\_

Date/Time Hose Disconnected: \_\_\_\_\_

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Responsibility and accountability for the safe conduct of operations whilst a vessel is at a terminal is shared between the Master Captain, or his/her representative and responsible Terminal representatives. Before cargo or ballast operations commence the Master Captain, or his/her representative, and the Terminal representative should:

- Agree in writing on the action to be taken in the event of an emergency during cargo/ballast handling operations.
- Complete and sign the Ship/Shore Safety Check List

The master Captain and all under his/her command must adhere strictly to these requirements throughout the ship's stay alongside. The Terminal Representative must ensure that shore personnel do likewise. Each party commits to co-operate fully in the mutual interest of safe and efficient operations.

Some of the Check-List statements are directed to considerations for which the ship has sole responsibility and accountability, some where the terminal has sole responsibility and accountability.

The assignment of responsibility and accountability does not mean that the other party is excluded from carrying out the checks in order to confirm compliance. The assignment of responsibility and accountability ensures clear identification of the party responsible for initial and continued compliance throughout the ship stay at the terminal.

The safety of operations requires that all relevant statements are considered and responsibility and accountability for compliance accepted, either jointly or singly. Where either party is not prepared to accept an assigned accountability a comment must be made in the "Remarks" column and due to consideration given to whether operations should proceed.

The presence of the letters "A", "P" or "R" in the column "Code" indicates the following:

- **A** (Agreement). This indicates any procedures or agreements that should be identified in the remarks column or communicated in some other mutually acceptable form.
- **P** (Permission). In the case of a negative answer to the questions coded "P", no operations are to be conducted without the appropriate written authority.
- **R** (Re-check). Indicates items to be re-checked at appropriate intervals as agreed between both parties.

Where item is agreed to be not applicable to the ship, to the terminal or to the operation envisaged, a note to that effect should be entered in the "Remarks" column.

The joint declaration should not be signed until all parties have checked and accepted their assigned responsibilities and accountabilities.

**PART "A": Physical Checks**

<i>General</i>		<i>Ship</i>	<i>Terminal</i>	<i>Code</i>	<i>Remarks</i>
1.	There is safe access between the ship and shore.			R	
2.	The ship is securely moored.			R	
3.	The agreed ship/shore communication system is operative.			AR	
4.	Emergency towing-off pennants are correctly positioned.			R	
5.	The terminal's firefighting equipment is positioned and ready for immediate use.			R	
6.	The ship's firefighting equipment is positioned and ready for immediate use.			R	
7.	The ship's cargo and bunker hoses, pipelines and manifolds are in good condition, properly rigged and appropriate for the service intended.				
8.	The terminal's cargo and bunker hoses or arms are in good conditions, properly rigged and appropriate for service intended.				
9.	The cargo transfer system sufficiency isolated and drained to allow removal of blank flanges prior to connection.				
10.	Scuppers and save-alls on board are effectively plugged and drip trays are in position and empty.			R	
11.	Temporary removed scuppe plugs will be constantly monitored.			R	
12.	Shore spill containment and sumps are correctly managed.			R	
13.	The ship's unused cargo and bunker connections are properly secured with plugs/blank flanges bolted.				
14.	The terminal unused cargo and bunker connections are properly secured with plugs/blank flanges bolted.				
15.	All cargo, ballast and bunker tanks lids are closed.				
16.	Sea and overhead discharge valves, when not in use, are closed and visibly secured.				
17.	All external doors, ports and windows in accommodations, stores and machinery spaces are closed. Engine room vents may be open.			R	
18.	The ship's emergency fire control plans are located externally.				Location:
<i>If the ship is fitted or is required to be fitted with an inert gas system(IGS) the following statement must be addressed.</i>					



19.	Fixed IGS pressure and oxygen contents recorders are working.			R	
20.	All cargo tank atmospheres are at positive pressure with oxygen less than 8% by volume.			PR	

Part "B": Verbal verification

<i>General</i>		<i>Ship</i>	<i>Terminal</i>	<i>Code</i>	<i>Remarks</i>
21.	The ship is ready to move under its own power or by tug boat.			PR	
22.	There is adequate deck watch in attendance on board and adequate supervision on board of operations on the ship and in the terminal.			R	
23.	There are sufficient personnel on board and ashore to deal with emergency.			R	
24.	The procedures for cargo, bunker and ballast handling have been agreed.			AR	
25.	The emergency signal and shutdown procedure to be used by the ship and shore have been explained and understood.			A	
26.	Material Safety Data Sheet (MSDS) for the cargo transfer have been exchanged where requested.			A	
27.	The hazard associated with toxic substances in the cargo being handled have been identified and understood.				
28.	International Shore fire connections installed.				
29.	The agreed tank venting system will be used.			AR	Method:
30.	The requirement for closed operations has been agreed.			R	Method:
31.	The operation of the P/V system has been verified.				
32.	Where a vapor return line is connected, operating parameters have been agreed.			AR	
33.	Adequate electrical insulating means are in place in the ship/shore connection.				
34.	Shore lines are fitted with non-return valve or procedures to avoid "back filling" have been discussed.			PR	
35.	Smoking regulations understood and being observed.			AR	
36.	Hand torches (flash lights) are of aa approved type.				
37.	Fixed VHF/UHF transceivers and AIS equipment are on the correct power mode or switch-off.				

38.	Portable VHF/UHF transceivers are of an approved type.				
39.	The ship's main radio transmitter aerials are earthed and radars are switched-off.				
40.	Electric cables to portable electrical equipment within hazardous area are disconnected from power.				
41.	Window type air conditioning units are disconnected.				
42.	Positive pressure is being maintained inside the accommodation.				
43.	There is provision for an emergency escape.				
44.	The maximum wind and swell criteria for operators has been agreed.			A	Stop Cargo at: Disconnect at: Unberth at:
45.	Security protocols have been agreed between the ship security officer and port facility security officer, if appropriate.			A	
<i>If the ship is fitted or is required to be fitted with an inert gas system(IGS) the following statement must be addressed.</i>					
46.	The IGS is fully operational and in good working order.			P	
47.	Deck seals, or equivalent, are in good working order.			R	
48.	Liquid levels in pressure/vacuum breakers are correct.			R	
<i>Inert Gas System</i>		<i>Ship</i>	<i>Terminal</i>	<i>Code</i>	<i>Remarks</i>
49.	The fixed and portable oxygen analyzers have been calibrated and working properly.			R	
50.	All the individual tank IGS valves (if fitted) are correctly set and locked.			R	
51.	All personnel in charge of cargo operators are aware that, in the case of failure of the inert gas plant, discharge operations should cease, and the terminal be advised.			R	
<i>If the ship is fitted with a Crude Oil Washing (COW) system, and intends to crude oil wash, the following statements must be addressed.</i>					
52.	The Pre-Arrival COW check-list, as contained in the approved COW manual, has been satisfactorily completed.				
53.	The COW check-lists for use before, during and after COW, as contained in the approved COW manual, are available and being used.			R	

**DECLARATION**

We, understand have checked the above items in Part “A” and “B” in accordance with the instructions, and have satisfied ourselves that the entries we have made are correct to the best of our knowledge.

We have also made arrangements to carry out repetitive checks as necessary and agreed that those items with Code “R” in the Check-List should be re-checked at intervals not exceeding \_\_\_\_ hours.

If to our knowledge the status of any items changes we will immediately inform the other party.

	<i>For Ship</i>	<i>For Terminal</i>
Name		
Position		
Date		
Time		
Signature		

Date										
Time										
Initials for Ship										
Initials for Shore										

## APPENDIX 5

### DEFINITIONS OF HOT WORK AND COLD WORK

**HOT WORK: –** Work involving temperature conditions, which are likely to be of sufficient intensity to cause ignition of combustible gases, vapours or liquids. Such work will include the following:

Welding, burning, hot riveting, hot forging, grinding or any other operation, including descaling, liable to produce sparks, blasting, soldering, electrical arcs and fires of any kind, the use of non-flameproof equipment and internal combustion engines.

**COLD WORK: –** Any work not covered by the above and includes use of air driven power tools for cutting, drilling and impacting when area of use can be effectively kept wet.

## POLLUTION AVOIDANCE CHECKLIST

1. Are main and poopdeck scuppers oil tight?
2. Are the maindecks being kept free of water?
3. Are spill tanks or cans under manifold before removal of blanks (plates)?
4. Are all unused cargo/bunker manifold connections closed and blanked and adequately bolted?
5. Are pressure gauges in place and/or cocks securely closed?
6. Are loading drop valves closed/open?
7. Are all shipside sea and overboard valves except segregated clean ballast valves shut and lashed or sealed?
8. Has proper coordination with shore been made prior to starting cargo or bunker?
9. Are emergency stop procedures established and understood?
10. Are segregated ballast tanks free from contamination?
11. Will deck/manifold be under proper supervision throughout cargo/bunker operations?
12. Has agreement been reached for controlling flow during topping off operations?
13. Are sufficient men, under an officer, assigned for cargo/bunker valve operations?
14. Do they fully understand tank changeover procedures?
15. Can cargo/bunker valves be closed and opened without difficulty?
16. Are valve indicators accurate?
17. Will frequent checks be made on tanks which have already been topped up?
18. Will a special watch be made on the tank receiving cargo draining?
19. Will sufficient room be left in last tanks for draining or airblowing of shore hoses/arms?
20. Are arrangements made for engine room and pumphouse bilge's to be pumped other than overboard during ship's stay in harbor?
21. Are there any known problems in ascertaining oil levels in cargo and bunker tanks?
22. Are adequate precautions being taken to avoid airlocks loading to tight ullages?
23. Will special precautions to avoid an outflow of oil from sea valves be made when starting ballast?
24. Have you a plan for dealing with spillage's and pollution if they occur?
25. Are facilities available for avoiding pollution if spillage occurs on deck?
26. Is there a supply of sawdust or other oil absorbing material available?

### Appendix 6

YES	NO

## APPENDIX 7

### PRE-ARRIVAL CRUDEWASH CHECKLIST

- AA There is a responsible designated person in charge of operation (give name).
- BB Effective communication will be maintained between ship and shore.
- CC Water will not be allowed to intrude into the crudewash cycle.
- DD Crudewashing will be carried out only with same grade crude as in the tank being washed.
- EE If DD not possible state degree of contamination required for each grade.
- FF Previous crudewash experience of key personnel is (list).
- GG Tanks crudewashed for last two voyages are (list).
- HH Any additional ship requirements or comments.
- II Estimated time discharge will be prolonged due to crudewashing.

## ON ARRIVAL CRUDEWASH CHECKLIST

1. Verify correctness of pre-arrival statements.
  2. All blank flanges or blinds (where fitted) on cargo pumps, stripping and eductor overboard discharge lines to be inserted.
  3. Hatch covers and openings are tight, no leaks.
  4. Washing machine entry points are tight, no leaks
  5. Method of transfer of washings
    - a) to slop tanks and ashore with grade
    - b) to suction side of main pumps and shore
    - c) other (explain)
- Note: Washings of different grades to be segregated.
6. Unless otherwise agreed all washing will be done with the same grade of crude as in the tank being washed.
  7. grade of crude as in the tank being washed.
  8. Is high level alarm fitted to slop tank with cargo control room indication and, does it work?
  9. indication and, does it work?
  10. Method of controlling required crude washing pressure.
  11. Ship operation procedures received/reviewed.
  12. Communication and abort procedures defined.
  13. Emergency procedure when transferring to slop tanks (i.e. availability of adjacent tanks).
  14. availability of adjacent tanks).
  15. Is washing system isolated from water heater and engine room?

YES	NO

The shift supervisor should be notified immediately of any changes to agreed plan.

FOR SHIP:

FOR TERMINAL:

## TANKCLEANING GUIDANCE CHART FOR SHIPS LOADING AT TDEA'S MARINE TERMINAL, ARUBA

LAST CARGO	CARGO TO BE LOADED										
IF GRADE LAST CARRIED	1	2	3	4	5	6	7	8	9	10	11
DOES NOT FALL WITHIN GENERAL SPECS. OF GRADES GIVEN BELOW, SEEK SPECIAL IN- STRUCTIONS	AVGAS	MOGAS	LOW LEAD NAPHTHA	KERO- SENE TURBO	GAS OIL HEAT- ING OIL	ESSO HEAT- ING	BELCO DIESEL	MARINE DIESEL	VACUUM OIL	FUEL OILS	CRUDE OILS
AVGAS	AD	D	C	HGSM	HG	HGM	HSF	HG	HG	H	D
MOGAS	CSM	AD	C	HGSM	HG	HGM	HSF	HG	HG	H	D
NAPHTHA	CSM	D	AD	HGSM	HG	HGM	HSF	HG	HG	H	D
KEROSENE/ TURBO FUEL	CSM	D	B	AD	B	BM	B	B	D	D	D
GAS OIL HEATING OIL	HSM	B	B	HSMW	AD	BM	B	B	D	D	D
MARINE DIESEL	HSM+	B+	B+	HSMW+	B+	HGM+	HSF	AD	D	D	D
VACUUM GAS OIL	X	X	X	X	X	X	HSF	HS	AD	D	D
FUEL OIL	U	U	U	U	U	U	HSF	HS	H	AD	D
GRUDE	U	U	U	U	U	U	HGH	HGS	HGS	SEE NOTE BELOW	AD

FOR EXPLANATION OF SYMBOLS SEE NEXT PAGE.

+ ASSUMES MDO CARRIED IN CLEAN SHIP. IF NOT, SUBSTITUTE U

### **LOADING FUEL OILS AFTER CRUDE OILS**

Where unpumpable bottom residues, sediments or bs&w remain from the previous cargo of crude oil, tank bottoms must be machine washed, hot or cold according to the removability of the sediments, lines and pumps flushed and all water and residues completely stripped from tanks, cargo lines and pumps into a single tank for pumping ashore prior to loading any residual type fuel oils. If appreciable sediments remain in ballast tanks on completion of discharge of dirty ballast ashore, it may be necessary to bottom wash this tank. The slop tank, if being used to load fuel oil, after discharge ashore must be hot machine washed and stripped dry of all water and sediment, pumping directly ashore. NOTE: If last cargo was a 'sour' crude see C1 (C).



## KEY GUIDANCE CHART

- A. When similar cargo to the last cargo carried is nominated and no ballast is carried in tanks or cargo system concerned, no preparation, other than draining, may be necessary unless advised to the contrary.
- B. Tank bottoms, cargo lines and pumps to be water washed; tank lines and pumps to be completely drained, special attention to be paid to dead ends and low points including deck lines and manifolds. Valves to be opened to drain lines of excess water.
- C. Tanks, lines and pumps to be coldwater machine washed; tank lines and pumps to be completely drained, special attention to be paid to dead ends and low points, including deck lines and manifolds. Valves to be opened to drain lines of excess water.
- D. Tanks, lines and pumps to be completely drained of cargo and/or water, special attention paid to deadends and low points including deck lines and manifolds.
- F. Fresh water rinse large tanks, lines, pumps and risers to remove traces of salt.
- G. Tanks must be gas free to below 40% of the lower explosive (or flammable) limit.
- H. Tanks to be hot water machine washed, lines and pumps to be hot washed; tanks, lines and pumps to be completely drained paying special attention to dead ends and low points, including deck lines and manifolds. Valves to be opened to drain lines of excess water.
- M. After gas freeing for entry, tank bottoms to be mopped dry of all water after valves have been opened, prior to loading.
- S. After gas freeing for entry, all loose scale and sediment to be removed.
- W. Spot tank cleaning machines where necessary to cover shadow areas, under beams and plate stiffeners, etc.
- X. Special cleaning instructions required from Owners/Charterers.
- U. Not suitable for this grade to follow.

- Note:
1. Hot wash water temperature (H) should be in accordance with coating manufacturers recommendations but not less than 95°F.
  2. If changing from dirty to clean trade special chemical cleaning is necessary.

**ANNEXE 1**

**TDEA Aruba Refining Company N.V.**

**ISPS Pre Arrival Questionnaire**

All vessels calling at the Ports of Aruba are required to submit the following information in order to comply with the International ISPS Code Regulations.

1. Certification date of the International Ship Security Certificate and Certifying Authority.
2. Security level at which the ship is operating.
3. Security level at which the ship operated during the last 10 calls at port facilities.
4. Any special or additional security measures taken by the ship within the period of the last 10 calls at port facilities.
5. Ship security procedures maintained during any ship-to-ship activity within the period of the last 10 calls at port facilities.
6. Any Declarations of Security that were entered into with port facilities or other ships.
7. Other practical security related information you can provide.
8. Crew list.
9. Passenger list.
10. What is the type and quantity of transit cargo (including any Dangerous Goods)?
11. Certification date of the ISM/SMC and Certifying Authority.

Please note that TDEA Aruba Terminal complies with the International ISPS Code Regulations and operates at Aruba Security level MARSEC 1.

- a) The Terminal is ISPS compliant and certified.
- b) Terminal approval date: June 28<sup>th</sup>, 2004.
- c) Port ID Number is: 23679.
- d) UN Locator code is: AWSNL.
- e) Port facility name is: Aruba: TDEA Refining Company-Aruba N.V.
- f) Assigned Port Facility number is: 0122
- g) The current security level at the Terminal is level 1.(Unless specified otherwise)
- h) Location of Port Facility is Latitude 12 ° 25.6 N - 069 ° 56.3 W
- i) All vessels are required to submit the ISPS Questionnaire prior berthing.
- j) Terminal Security related channels are VHF channel 16 and 08.
- k) All crewmembers leaving or entering terminal must identify themselves with a valid ID at the end of the jetty and at the Terminal Main Gate.
- l) Failure to present valid ID could cause refusal of access to/from the Terminal.
- m) Terminal PFSO are as follows:

FPSO 1. - **Emiro G Martis**  
Tel: 589-8618  
Mobile : 5927488  
E-mail : [Greg.Martis@nrg-aruba.com](mailto:Greg.Martis@nrg-aruba.com)

FPSO 2. - \_\_\_\_\_  
Tel: \_\_\_\_\_  
Mobile : \_\_\_\_\_  
E-mail : \_\_\_\_\_

**ANNEXE 2**

**TDEA Aruba Refinery**

**Pre Arrival Questionnaire**  
**Revised September 2013**

For all dry bulk vessel's loading Petcoke / Sulphur at HDS Pier and New Coke Facility berth.

All vessels are required to submit the following information, via agents to TdEA Aruba Refinery a minimum of Forty-Eight (48) hours prior to arrival. Please answer all questions. Reply N/A, to those questions, which are not applicable.

Ships arriving for bunkers need only answer questions one (1) through eight (8) and sixteen (16) through twenty one (21).

1. Vessel's Name and Call sign.
2. Vessel's ETA Pilot Station.
3. Nationality and Class Society.
4. Previous names.
5. Type of Bulk Carrier, (Geared / Gearless)
6.
  - a) GRT,
  - b) NRT,
  - c) SDWT,
  - d) LOA,
  - e) Moulded Breadth,
  - f) Moulded Depth,
  - g) Summer Draft,
  - h) TPC
7. Arrival and Estimated Sailing Drafts. (SW/FW).
8. Is vessel fitted with Bow/Stern Thruster Twin Screw/Twin Rudder?
9.
  - a) Is vessel ready to load upon arrival (If not state time required and reasons),
  - b) Max Loading rates (State MT/HR).
10. Quantity of cargo to be loaded, average constant and loading sequence.
11. Maximum height from waterline to hatch coaming during loading.
12. Is vessel fitted with self trimming hatches, if not state method of trimming cargo?
13. Type and quantity of transit cargo
14. Last three cargoes carried (State last Cargo first)
15. Type and Quantity of slops (Engine Room), if any.
16. If applicable, quantity and grades of Bunkers requirement. Size and distance bow to bunker manifold.
17. Is vessel familiar with TdEA "Jetty Regulations and Port Information"(Revised Edition Sept. 2013).
18. Are the vessel's Steering and Propulsion systems operational and in good working order.
19. Does vessel have any defects / non-conformities which may affect safe and efficient cargo or maneuvering operations?
20. Vessel's ISM/SMC Certification date and certifying Authority.
21. Does vessel have ISO 9002 / 14001 Accreditation?

All vessels calling at TdEA please note:

- a) TdEA Pilot Station is located at 12° degrees 25.11 minutes North and 069° Degrees 54.6 minutes West.
- b) Vessel's berthing at HDS piers can use own gangway, when shore gangway is not provided, please have appropriate means of access ready for use on arrival.
- c) Vessels with bunker requirements must co-ordinate in advance between TdEA Marketing & Sales.
- d) On arrival vessels to have ready and present either original or copy of the following documents for the TdEA Representative: Loading plan in sequence. Harbor Stability condition (SF/BM). Completed most recent Vessel Particulars. Ballast Water Reporting Form (IMO Res A 868 (20)).
- e) Vessels berthing at the New Coke Facility berth please find following additional information:
  - Max LOA: 800 Feet, Max Beam: 115 feet.
  - Max Draft: 40 Feet, Max Air Draft 55 feet.
  - Berthing restrictions: Vessel's over 650 feet, berthing during daylight hours only.

**ANNEXE 3**

**Terminal di Energia Aruba N.V.**

**Pre-Arrival Questionnaire**  
**Revised September 2013**

For all dry General Cargo / Container / Roro ect. Vessel's loading and or discharging at HDS Pier.

All vessels are required to submit the following information, via agents to TdEA a minimum of Forty-Eight (48) hours prior to arrival. Please answer all questions. Reply N/A, to those questions, which are not applicable.

Ships arriving for bunkers need only answer questions one (1) through eight (8) and fourteen (14) through nineteen (19).

1. Vessel's Name and Call sign.
2. Vessel's ETA Pilot Station.
3. Nationality and Class Society.
4. Previous names.
5. Type of Vessel, General Cargo (Geared / Gearless/ Twin Decker), Container (Geared / Gearless), Ro-ro, Break Bulker (Geared / Gearless) ect.
6.
  - a) GRT,
  - b) NRT,
  - c) SDWT,
  - d) LOA,
  - e) Moulded Breath,
  - f) Moulded Depth,
  - g) Summer Draft,
  - h) TPC
7. Arrival and Estimated Sailing Drafts. (SW/FW).
8. Is vessel fitted with Bow / Stern Thruster Twin Screw/Twin Rudder?
9. a) Is vessel ready to load upon arrival (If not state time required and reasons?)
10. Quantity of cargo to be loaded/ discharged/ hatch/ bay and loading/discharging sequence as per Stowage Plan.
11. For Ro-ro Vessel's only, is vessel fitted with Stern Ramp / Side Shell Door or Bow Door and max windage area.
12. For Container Vessel's only, height of highest stacks from main deck level.
13. Type and quantity of transit cargo (Include Dangerous Cargo), if any.
14. If applicable, quantity and grades of Bunkers requirement. Size and distance bow to bunker manifold.
15. Is vessel familiar with TdEA "Jetty Regulations and Port Information" (Revised Edition Sept. 2013).
16. Are the vessel's Steering and Propulsion systems operational and in good working order.
17. Does vessel have any defects / non-conformities which may affect safe and efficient cargo or maneuvering operations?
18. Vessel's ISM/SMC Certification date and certifying Authority.
19. Does vessel have ISO 9002 / 14001 Accreditation?

All vessels calling at TdEA please note:

- a) TdEA Pilot Station is located at 12° degrees 25.10 minutes North and 069° Degrees 54.6 minutes West.
- b) Vessel's berthing at HDS piers can use own gangway, when shore gangway is not provided, please have appropriate means of access ready for use on arrival.
- c) Vessels with bunker requirements must co-ordinate in advance between TdEA Marketing & Sales.
- d) On arrival vessels to have ready and present either original or copy of the following documents for the TdEA Representative:
  - For Discharges: Complete set of consignee / receivers documents, to include load port Cargo Stowage Plan (Container vessel's include Planner's report), Certificate of Origin, Cargo Manifest, Dangerous Cargo Manifest ect, Statement of Facts / Time Log ect.
  - For Vessel's loading: Loading plan in sequence / Harbor Stability condition (SF/BM).
  - For all vessels: Completed most recent Vessel Particulars. Ballast Water Reporting Form (IMO Res A 868 (20))

**ANNEXE 4**

**Terminal di Energia Aruba N.V.**

**Pre Arrival Questionnaire**  
**Revised September 2013**

For all LPG Vessel's loading and discharging at Inner Harbor.

All vessels are required to submit following information, via agents to TdEA a minimum of Forty-eight (48) hours prior to arrival. Please answer all questions. Reply N/A to those questions that are not applicable. A vessel arriving for bunkers need only answer questions one (1) through eight (8) and twenty (20) through twenty four (24).

1. Vessel's Name and Call sign.
2. Vessel's ETA Pilot Station.
3. Nationality and Class Society.
4. Previous names.
5. Type of LPG Carrier (Press/Semi Press/Fully Ref/Semi Ref) & Type of Tanks (A/B/C)
6.
  - a) GRT,
  - b) NRT,
  - c) SDWT,
  - d) LOA,
  - e) Distance BCM
  - f) Moulded Breath,
  - g) Moulded Depth,
  - h) Summer Draft,
  - i)TPC.
7. Arrival and Estimated Sailing Drafts. (SW/FW).
8. Is vessel fitted with Bow/Stern Thruster Twin Scew/Twin Rudder?
9.
  - a) Is vessel ready to load / discharge upon arrival (If not state time required and reason), and Max loading and discharge rates. (State Bbls/Hr)
  - b)If applicable, is vessel capable of loading or discharging more than one grade simultaneously and maximum loading or discharging rates for each grade.
  - c) For vessels arriving for discharge: Number of tanks with cargo for discharge.
  - d) Method of sampling (Closed or Open hatch).
10. Number size and product line up from forward to aft of vessel's manifold connections, also include number/size of reducers available onboard. Distance between Manifolds. (Terminal has 4-x10 inch, inner harbor and 4-x16 inch at Reef Berths)
11. Maximum height from waterline to manifold during load or discharge.
12.
  - a) Is vessel fitted with Operational IG System and
  - b) date filters last changed?
13. For loadings, if applicable: Time required to inert tanks prior loading.
14. Type of a) Tank coatings and b) heating coils, if any.
15. Type and quantity of transit cargo, if any.
16. Last three cargoes carried (State last cargo first)
17. If applicable what type of tank cleaning has been performed by vessel, for present cargo.
18. Type of ballast onboard, SB / CB ect. And can vessel ballast/deballast concurrently with load/discharge operations, if not state required time for it. Does vessel comply with IMO Res A. 868 (20)
19. Type and quantity of Slops, if any.
20. Can vessel discharge slops concurrently with load/discharge. Distance bow to slops manifold.

21. If applicable, quantity and grades of Bunker requirement. Size and distance bow to bunker manifold.
22. Is vessel familiar with TdEA “Jetty Regulations and Port Information” (Revised Edition Sept. 2013), onboard.
23. Are vessel’s steering and propulsion systems operational and in good working order.
24. Does vessel have any defects / non-conformities which may affect safe and efficient cargo or maneuvering operations?
25. Vessel’s ISM/SMS Certification date and certifying Authority.
26. Does vessel have ISO 9002/14001 Accreditation

All vessels calling at TdEA please note:

- TdEA Terminal pilot stations are located:
  - a) For vessels coming to the Inner Harbor 12 Degrees 25.60 minutes North and 069 Degrees 56.30 minutes West
  - b) For vessels coming to the Outer Harbor (Reef berths) 12 Degrees 25.60 minutes North and 069 Degrees 57.20 minutes West.
  - c) For vessels coming to the HDS or New Coke Facility 12 Degrees 25.11 minutes North and 069 Degrees 54.6 minutes West.
- Vessels berthing at Inner harbor require to use vessel own Gangway/Accommodation Ladder, please have appropriate means of access ready for use on arrival.
- TdEA Terminal does not accept slops without prior co-ordination, please contact vessel agent for details.
- Vessels with bunker requirements must coordinate in advance with TdEA Sales.
- On arrival vessel should have ready and present either original or copy of the following documents for TdEA N.V. Representative:
  - For Loadings: Load/Stowage plan, Cargo Nomination; grade wise.
  - For Discharges: Complete set of consignee / receiver’s documents, load port cargo inspectors reports, cargo analysis, OBQ and ullage reports, bunker survey, VEF and statement of facts / time log ect.
  - For all vessels: Completed most recent edition of Vessel Particular Questionnaire OCIMF, Ballast Water c)



**ANNEXE 5**

**Terminal di Energia Aruba N.V.**

**Pre Arrival Questionnaire**  
**Revised September 2013**

For all product and crude vessel's loading and discharging at Inner Harbors and Reef Berths, and for vessel's lifting bunkers only.

All vessels are required to submit the following information via their agents to the TdEA within a minimum of Forty-eight (48) hours prior to arrival. Please answer all questions and put N/A to those questions that are not applicable.

Ships arriving for bunkers please only answer questions one (1) through seven (7) and twenty (20) through twenty-five (25).

1. Vessel's Name and Call Sign.
2. Vessel's ETA Pilot Station.
3. Nationality and Class Society.
4. Previous names.
5. Type of Hull (DH/SH/DS other) and Type of Vessel (OBO/PROBO/O.O/PRODUCT TANKER)
6. a) GRT,  
b) NRT,  
c) SDWT,  
d) LOA,  
e) Distance BCM,  
f) Molded Breadth,  
g) Molded Depth,  
h) Summer Draft,  
i) TPC.
7. Arrival and estimated Sailing Drafts (SW/FW).
8. a) Is vessel ready to load/discharge upon arrival (If not state time required and reason), and maximum loading or discharge rates (State Bbls/Hr.).  
b) If applicable, is vessel capable of loading or discharge more than one grade simultaneously and maximum loading or discharging rates for each grade?  
c) For vessels arriving for discharge: Number of tanks with cargo for discharge.  
d) Method of sampling (Closed or Open hatch).
9. Number size and product line up from forward to aft of vessel manifold connection, also include number/size of reducers available onboard.  
(Terminal has 4x10 inch Inner Harbor and 4x16 inch at Reef Berths).
10. Maximum height from waterline to manifold during loading or discharge.
11. a) Is vessel fitted with operational IG System? b) Date filters last changed?
12. For loading if applicable: time required to inert tanks prior loading.
13. Type of: a) Tank coatings b) Heating coils, if any.
14. Type and quantity of transit cargo, if any.
15. Last three cargoes carried (State last cargo first).
16. If applicable what type of tank cleaning performed by vessel, for present cargo.
17. Type of Ballast onboard (SB/CB ect.) and can vessel ballast/de-ballast concurrently with load/discharge operations, if not state time required for it.
19. Can vessel discharge slops concurrently with load/discharge operations. Distance bow to slop manifold.

20. If applicable, quantity and grades of Bunkers requirement. Size and distance bow to bunker manifold.
21. Is vessel familiar with TdEA's "Jetty Regulations and Port Information" (Revised Edition Sept. 2013)?
22. Are the vessel's steering and propulsion systems operational and in good working order.
23. Does vessel have any defects / non-conformities which may affect safe and efficient cargo or maneuvering operations?
24. Vessel's ISM/SMC Certification date and certifying Authority.
25. Does vessel have ISO 9002/14001 accreditation?

All vessels calling at TdEA Terminal please note:

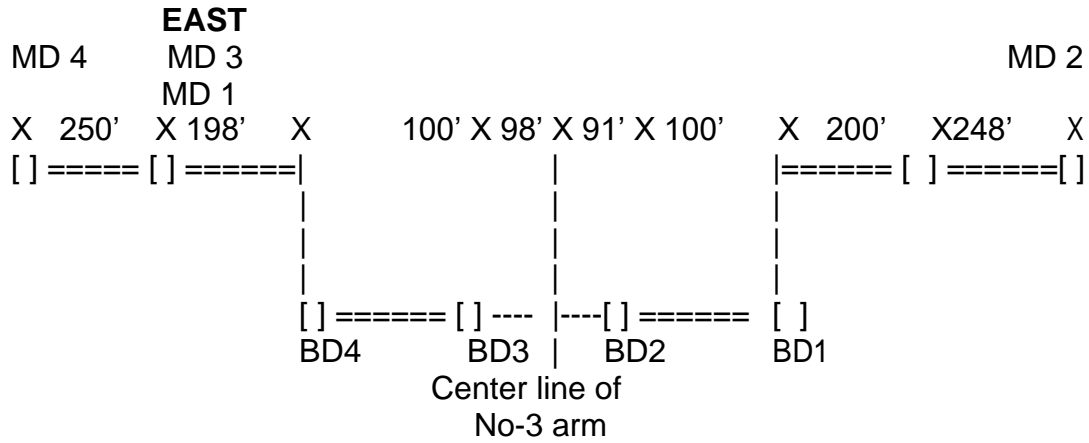
1. TdEA Terminal pilot stations are located:
  - a) For vessels coming to the Inner Harbor 12 Degrees 25.60 minutes North and 069 Degrees 56.30 minutes West
  - b) For vessels coming to the Outer Harbor (Reef berths) 12 Degrees 25.60 minutes North and 069 Degrees 57.20 minutes West.
  - c) For vessels coming to the HDS or New Coke Facility 12 Degrees 25.11 minutes North and 069 Degrees 54.6 minutes West.
2. Vessels berthing at Inner harbor require to use vessel own Gangway/Accommodation Ladder, please have appropriate means of access ready for use on arrival.
3. TdEA Terminal does not accept slops without prior co-ordination, please contact vessel agent for details.
4. Vessels with bunker requirements must coordinate in advance with TdEA Sales.
5. On arrival vessel should have ready and present either original or copy of the following documents for TdEA N.V. Representative:  
For Loadings: Load/Stowage plan, Cargo Nomination; grade wise.  
For Discharges: Complete set of consignee / receiver's documents, load port cargo inspectors reports, cargo analysis, OBQ and ullage reports, bunker survey, VEF and statement of facts / time log ect.  
For all vessels: Completed most recent edition of Vessel Particular Questionnaire OCIMF, Ballast Water

**ANNEXE 6**

Reef Berth No.1 distance between mooring dolphins.

**Reef Berth No.1**

**WEST**



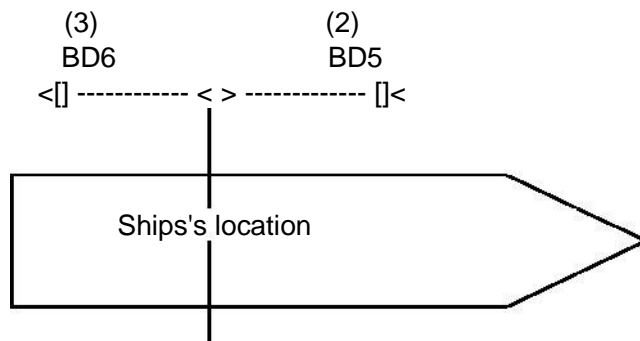
ANNEXE 7

Reef Berth No.2 (Distance between dolphins)



Distance between #5 and #6 (Inner B. Dolphins) and – distance from:  
#5 B. Dolphin to No.4 arm < ----- > No. 4 arm to  
#6 B. Dolphin (No-2) (No-3) ( ship's bow to manifold)

Center line of #4 arm

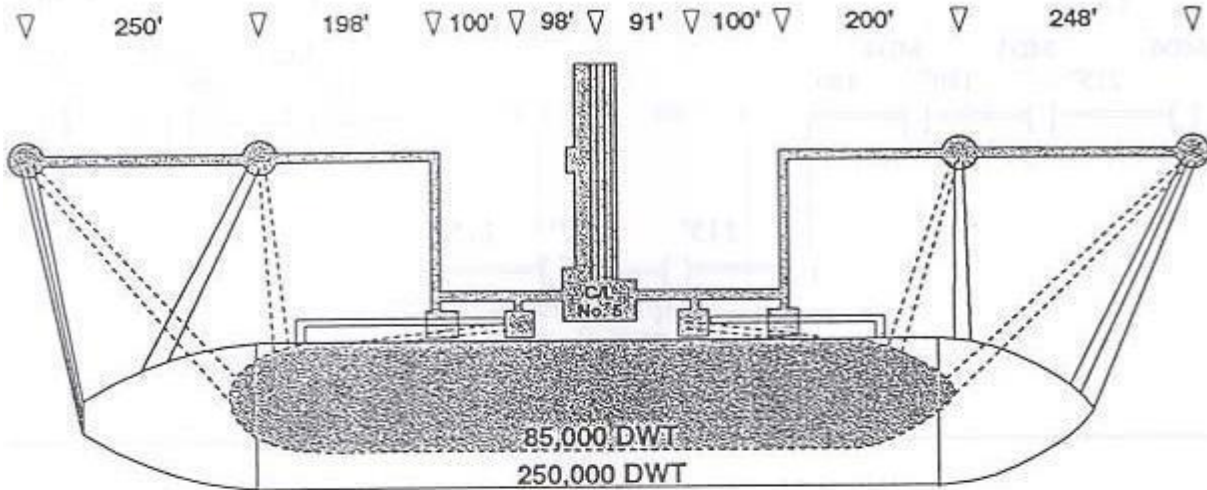


When using the arm  
Drift = 20ft. Maximum  
Free Board = 15ft. Minimum  
Distance Rail to the Ship's flange Min. = 12ft – Max. = 20ft.  
Distance ship's deck to ship's deck line = 24" min.

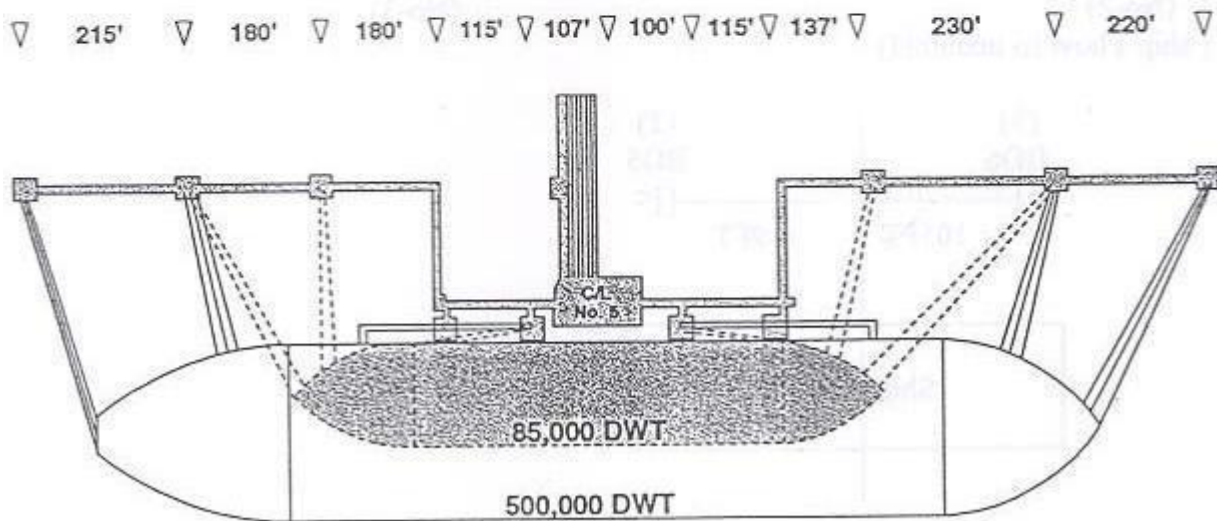


**ANNEXE 8**

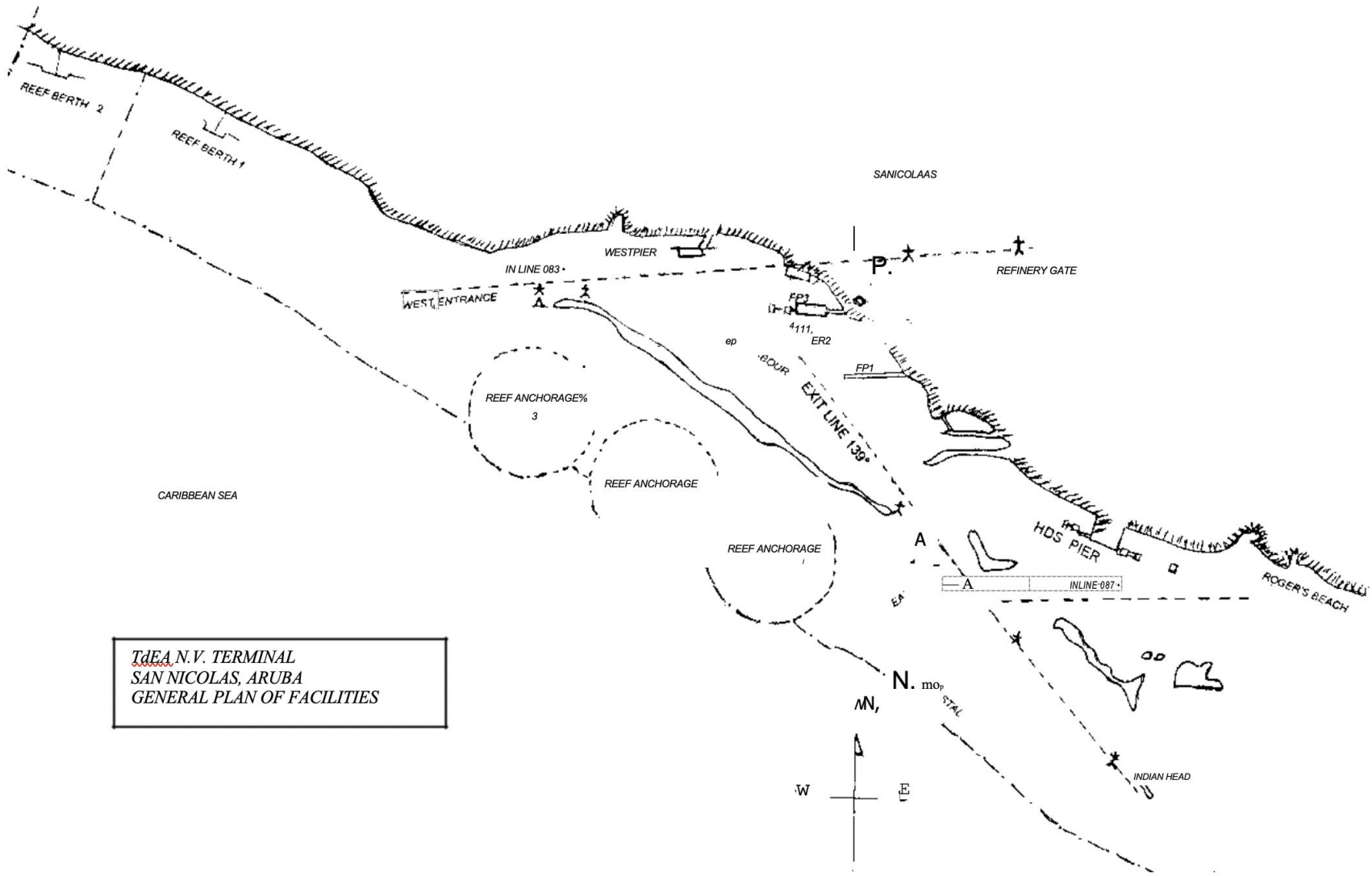
**TYPICAL MOORING DIAGRAM FOR REEF BERTHS**



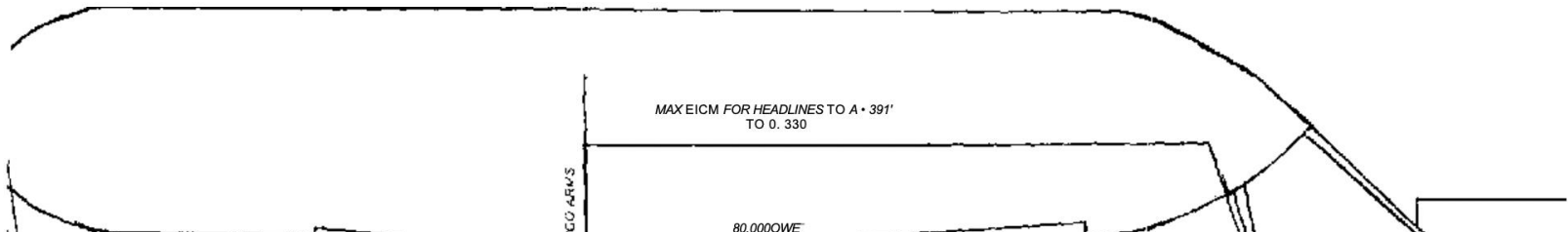
**RB-1**



**RB-2**



*TdEA N.V. TERMINAL  
SAN NICOLAS, ARUBA  
GENERAL PLAN OF FACILITIES*

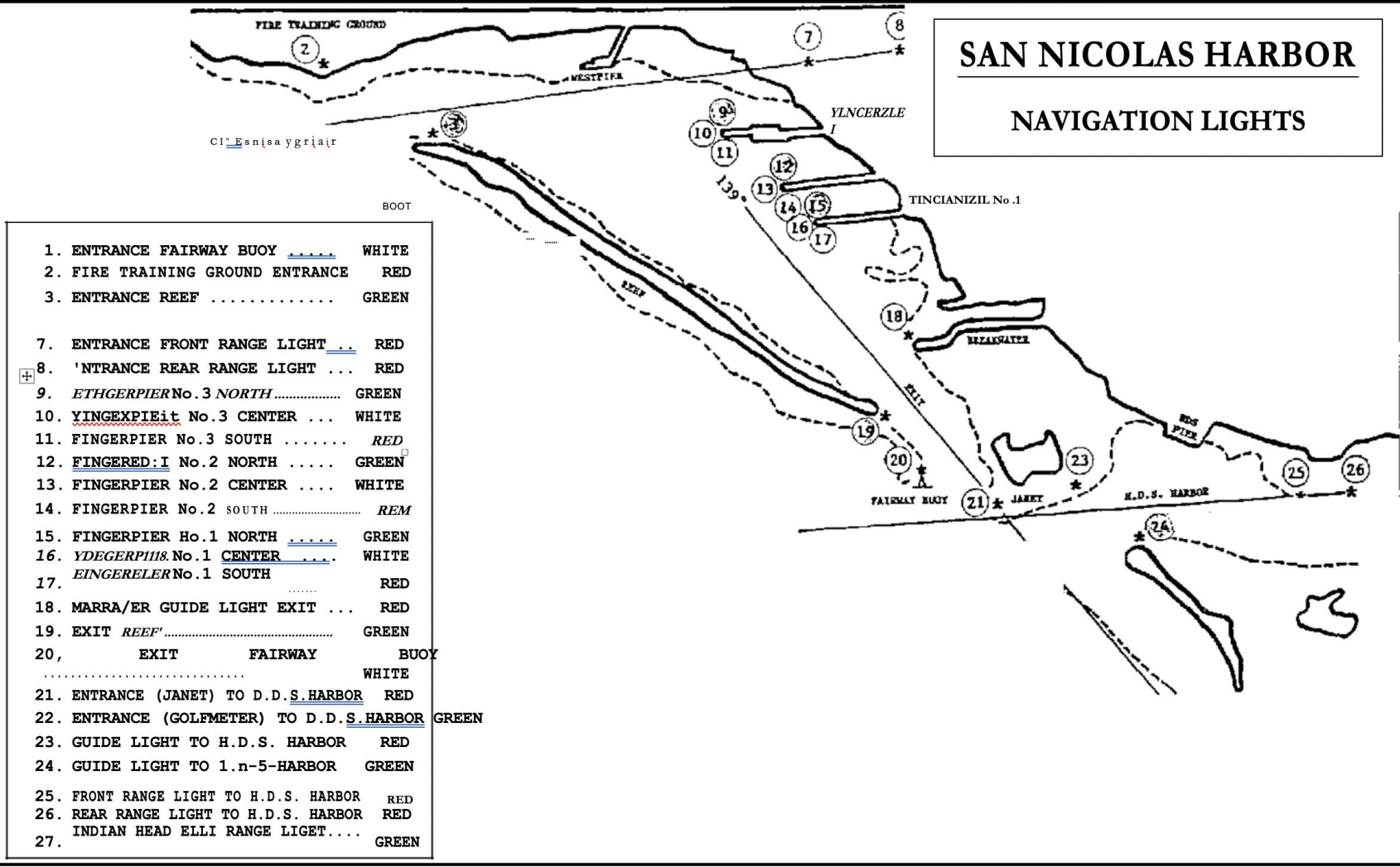








### SAN NICOLAS HARBOR NAVIGATION LIGHTS



- |     |                                       |       |
|-----|---------------------------------------|-------|
| 1.  | ENTRANCE FAIRWAY BUOY                 | WHITE |
| 2.  | FIRE TRAINING GROUND ENTRANCE         | RED   |
| 3.  | ENTRANCE REEF                         | GREEN |
| 7.  | ENTRANCE FRONT RANGE LIGHT            | RED   |
| 8.  | ENTRANCE REAR RANGE LIGHT             | RED   |
| 9.  | ETHGERPIER No.3 NORTH                 | GREEN |
| 10. | YINGEXPIEit No.3 CENTER               | WHITE |
| 11. | FINGERPIER No.3 SOUTH                 | RED   |
| 12. | FINGERPIER No.2 NORTH                 | GREEN |
| 13. | FINGERPIER No.2 CENTER                | WHITE |
| 14. | FINGERPIER No.2 SOUTH                 | RED   |
| 15. | FINGERPIER No.1 NORTH                 | GREEN |
| 16. | YDEGERPII18 No.1 CENTER               | WHITE |
| 17. | EINGERELER No.1 SOUTH                 | RED   |
| 18. | MARRA/ER GUIDE LIGHT EXIT             | RED   |
| 19. | EXIT REEF                             | GREEN |
| 20. | EXIT FAIRWAY BUOY                     | WHITE |
| 21. | ENTRANCE (JANET) TO D.D.S. HARBOR     | RED   |
| 22. | ENTRANCE (GOLFMETER) TO D.D.S. HARBOR | GREEN |
| 23. | GUIDE LIGHT TO H.D.S. HARBOR          | RED   |
| 24. | GUIDE LIGHT TO I.n-5-HARBOR           | GREEN |
| 25. | FRONT RANGE LIGHT TO H.D.S. HARBOR    | RED   |
| 26. | REAR RANGE LIGHT TO H.D.S. HARBOR     | RED   |
| 27. | INDIAN HEAD ELLI RANGE LIGHT          | GREEN |