

Port Information Booklet

Public Pier



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1. Purpose of this document

This book contains general port information and identifies applicable regulations, safe work procedures, emergency response details, and specific information governing the operations of ships at the berth. All operations at Cattalini terminal will be carried out fully in accordance with the recommendations contained in the latest edition of the International Safety Guide for Oil Tankers and Terminal (ISGOTT).

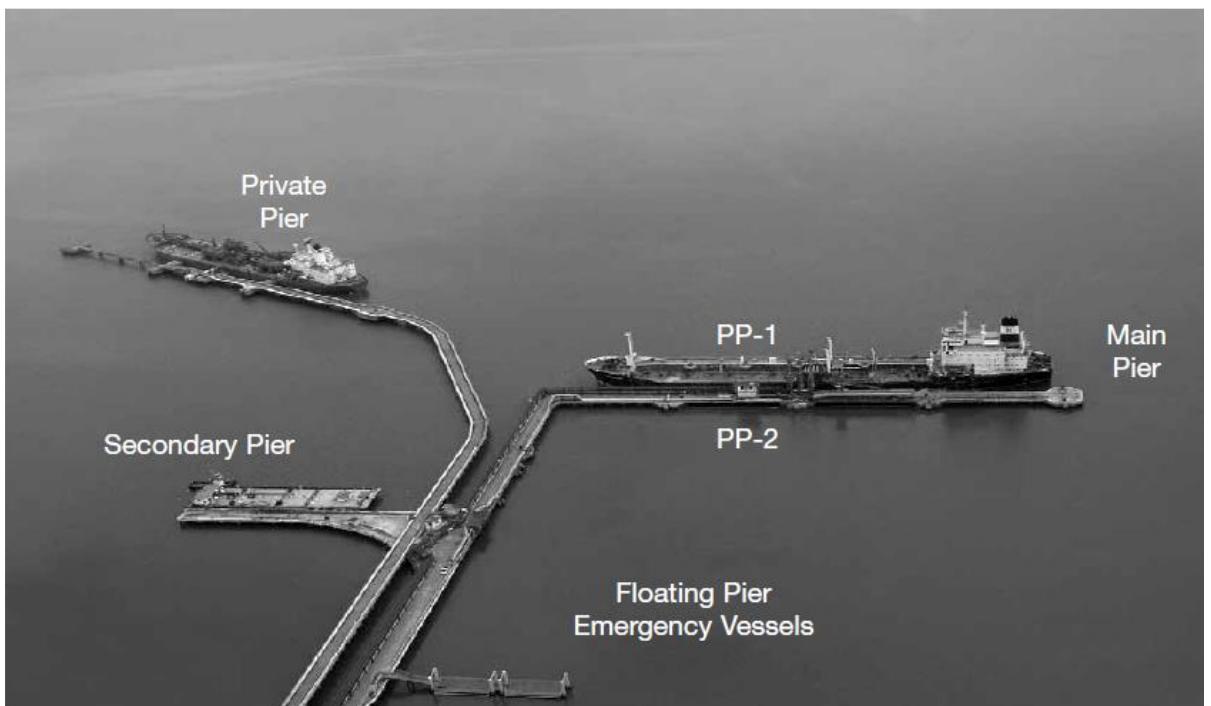


Figure 1- Source: PI Transpetro

Shore lines operational restrictions

Shore Line Number	Shore Line / Hose Connection Diameter	Pressure / Flow (Max.)
Carbon Steel ACDP- 103	12" / 8"	10bars / 1,200m ³ /h
Stainless Steel AIDP- 107	12" / 8"	10bars / 1,200m ³ /h

2. Vessel Acceptance

The Cattalini's commercial manager and team, upon receive the Q88 form, will emit an e-mail informing the decision in accept the nominated vessel, and requesting the items as below:

"Please consider the vessel XX.XX is in accordance with our berth dimensions, but please attention with restrictions below:

PP-1 (141):

LOA: 190 meters;

DWT: 45,000;

Draft: 11.60 meters.

Breadth: 40.00 meters

PP-2 (142):

LOA: 190 meters;

DWT: 45,000;

Draft: 11.60 meters.

Breadth: 35.00 meters

Terminal require Vessel's gangway in safe conditions;

On-board crane in working condition.

Cattalini Terminal provides a copy of Port information Booklet and Pre-Arrival information instructions to the agents. These docs must be sent to the vessel by the nominated agent.

The Cattalini Terminal's contacts are:

✓ **Private Pier Control Room**

E-mail: E_pier@cattaliniterminais.com.br

Phone: +55 41 3420-3599

✓ **Mr. Oliveira, Lucas Perrone - Manager**

E-mail: Lucas.oliveira@cattaliniterminais.com.br

Phone: +55 41 3420-3523

***Maximum allowed operating pressure**

Anchorage Areas

Within the channel, and along the dredged strip, there are several maritime areas designated for the anchorage.

Area 1. Only for barges.

Depth: 7 to 11 meters

Points	South Latitude	West Longitude
1	25° 28' 33"	048° 37' 41"
2	25° 28' 51"	048° 37' 41"
3	25° 28' 46"	048° 38' 37"
4	25° 28' 29"	048° 38' 37"

Area 2.

Provisionally designated for ships of the following lengths or who find themselves in one of the following situations, and complying with the order of anchoring priority in which they are listed:

- **Ships with maximum lengths of 210 meters and up to 37-foot draft;**
- **Ships operating at the Port of Antonina;**
- **Ships requiring refueling with fuel oil and/or lubricant for their own consumption.**

The anchorage location will be established according to the depth in the area where the ship turns.

Depth: 7 to 14 meters.

Points	South Latitude	West Longitude
1	25° 29' 31"	048° 31' 35"
2	25° 29' 50"	048° 31' 35"
3	25° 30' 02"	048° 33' 31"
4	25° 29' 40"	048° 33' 31"

Area 3.

Designated for ships less than 180 meters long.

> Depth: 6 to 10 meters.

Points	South Latitude	West Longitude
1	25° 29' 09"	048° 30' 53"
2	25° 29' 34"	048° 30' 53"
3	25° 29' 34"	048° 31' 35"
4	25° 29' 09"	048° 31' 35"

3. Paranaguá Port Access

One arrives by sea to Paranaguá through the Canal da Galheta defined in the Navy Sea Charts numbers 1.820, 1.821 and 1.822. The waterway is between 150 and 200 wide and 20 miles long and 13 to 15 meters deep. The bottom is made of sand allowing safe navigation to bulk ships up to 78 thousand metric tons.

To approach Paranaguá safely, bearing in mind the dangerous sandbars (Superagui, Ciganos, Palmas and Galhetas), the most important precaution is always keeping the ship outside the 10-meters isobathic line indicated on the charts.

The first anchorage area at the disposal of the ships heading to Paranaguá is the pilot embarkation area. The reference coordinates of the location are, lat. 25° 31', 10 S and long. 048° 15', 50 W, and it is located between the entrances of the Southeast and Canal da Galheta near buoy 1. Depth here ranges from 13 to 18 meters, and the seabed is sandy in nature, the area being unsheltered against winds, on the open sea.

3.1 Navigation aids

Ships proceeding from the N via the coastal route in daylight will catch sight of the peaks of the Cardoso Island, 890 meters high, and the Bom Abrigo Island. Near the coast, at approximately 15 to 20 miles, they will also catch sight of the Castilho and Figueira islands, and the Morro do Lopes (Lopes Hill), 420 meters high.

When approaching the position indicated on the chart 1820 as viewpoint (25° 36' S – 048° 01' W), they will be able to identify, with some accuracy, the outstanding points of the Paranaguá bar, which will assume the appearance of small islands in the horizon.

These points are: Palmas Island, Morro da Fortaleza (Fortaleza Hill), at Ilha do Mel, Conchas lighthouse, Morro do Joaquim (Joaquim Hill), Morro da Cotinga (Cotinga Hill),

Morro do Meio (Middle Hill), Morro Bento Alves (Bento Alves Hill), Morro Encantado (Enchanted Hill) and Galheta Island.

Area 4.

Designated for ships less than 180 meters long.

> Depth: 7 to 11 meters.

Points	South Latitude	West Longitude
1	25° 29' 17"	048° 30' 21"
2	25° 29' 27'	048° 30' 20"
3	25° 29' 28"	048° 31' 53"
4	25° 29' 09"	048° 31' 53"

Area 5

Designated for ships to be visited by the port health authorities and others, when the ship conditions so recommend.

> Depth: 10 to 13 meters.

Points	South Latitude	West Longitude
1	25° 29' 17"	048° 30' 21"
2	25° 29' 27'	048° 30' 20"
3	25° 29' 28"	048° 31' 53"
4	25° 29' 09"	048° 31' 53"

Area 6

Designated for ships over 180 meters long, and ships with any length needing to be refueled with fuel oil and/or lubricants for their own consumption.

> Depth: 7 to 14 meters.

Points	South Latitude	West Longitude
1	25° 29' 09"	048° 26' 20"
2	25° 29' 30'	048° 26' 20"
3	25° 29' 34"	048° 29' 46"
4	25° 29' 11"	048° 29' 46"

When approaching the port at night, the navigator proceeding from the N will catch sight of the Bom Abrigo lighthouse, and then, the Conchas lighthouse. Both are used for guiding the navigation to the surroundings of one of the holding buoys, either by using the Southeast or the Canal da Galheta.

When approaching Paranaguá in daylight, using the chart 1800, the navigator may catch a good view of Morro Grande (Big Hill) (25° 38' S – 048° 41' W), which is to the NW from Serra da Prata. When near the viewpoint of the chart 1821, the navigator will have the view already described, and may proceed in the same manner.

When approaching at night and if the navigation is correct, the navigator will first catch sight of the Conchas lighthouse. Proceeding from the S, in daylight and with good visibility, the navigator will catch sight of Morro Grande, and will have the same view as mentioned above. When navigating at night or along the coast, the lighthouse on Paz Island, followed by the Conchas lighthouse will be available to the navigator.

3.2 Pilotage

Is mandatory for foreign ships, tankers, propane carriers and ships carrying explosive cargoes under the Brazilian flag, of any size or gross tonnage.

The pilot embarks at the location indicated on the chart 1821, approaching the port by the Southeast or Galheta

channels, and guiding the ship to the mooring berth.

The pilot embarkation point is near buoy 1, regardless of the channel used, whether the Southeast or Galheta. The circular maritime area with a 1-mile radius, indicated on the chart 1821, with 1-sec white-flashing luminous buoy, is the pilots' waiting area for.

Area 7

Designated for ships in the following situations or of the following types/lengths, when complying with the anchoring order of priority in which they are listed:

- **Ships of any size under quarantine;**
- **Ships of any size operating with explosives;**
- **Ships that require refueling with fuel oil and/or lubricant for their own consumption;**

> Ships over 180 meters long;

> Depth: 9 to 12 meters.

Points	South Latitude	West Longitude
1	25° 29' 45"	048° 26' 15"
2	25° 30' 10'	048° 26' 15"
3	25° 30' 08"	048° 27' 12"
4	25° 29' 47"	048° 27' 12"

Area 8

Designated for ships over 180 meters long.

> Depth: 8 to 10 meters.

Points	South Latitude	West Longitude
1	25° 30' 03"	048° 23' 46"
2	25° 30' 18'	048° 24' 00"
3	25° 29' 45"	048° 24' 52"
4	25° 29' 27"	048° 24' 38"

Tug info

Operator	Name	Type	Power (HP)	Bollard pull (ton)
Svitzer	¹ Maria Darian	AZD	4.802	77
Svitzer	² Zoe	AZD	5.000	62
Fire Fighting System				
Class	Monitor Model	Capacity	Distance	Pressure
1	¹ FFS 1200 LB	1.200m ³ /h	>120m	10bar
1	² ES 100-400	300m ³ /h	>38m	12bar

The request for a pilot may be made by the navigation company's agent, at least three hours in advance, when the estimated entrance or exit time of the ship shall be specified. Ships approaching Paranaguá shall contact the Paranaguá-Radio, channel 16 VHF, two hours before reaching the pilots' waiting area. The Associação de Práticos (Pilots' Association) permanently monitors channel 16 VHF, and traffic on channels 12 and 14 VHF.

Each captain is solely responsible for the maneuvers, and he must provide the pilot with all information on any existing peculiarity, specific conditions or difficulties, such as: engine or boiler problems, problems or damage to navigation aid instruments, mooring lines or any element that may offer risks for mooring, rope release, loading/discharging the ship.

3.3 Tugs

There are companies providing maritime towing services, registered by the Portos do Paraná Port Authority, and each one must keep at least one tug operating in the Organized Port's area. Only registered tugs may operate in this area. The tug companies shall inform Portos do Paraná Port Authority about the vessels out of operation, and the estimated term for their return to towing activities.

The recommended number of tugs is defined in the rules and procedures for the Harbor Masters (NPCP) and will depend on the gross tonnage of the ships and the static traction force of the tugs. At Portos do Paraná Port Authority discretion, the recommended number may be changed, bearing in mind the sophistication of the ship to be towed and the berthing risks.

The maneuvers requiring assistance from tugs will be monitored by Portos do Paraná Port Authority, under request from the ship's owner or agent. No towing maneuver may be carried out without Portos do Paraná Port Authority knowledge, who will determine the priorities.

Other maneuvers with tugs considered independent shall be requested directly to the companies providing this service at Paranaguá, by informing Portos do Paraná Port Authority.

The most powerful tugs will have priority over the others in maneuvers with large ships.

Operator	Name	Type	Power (HP)	Bollard pull (ton)
Sulnorte	SN Jauá	ASD	2.828	41
Sulnorte	SN Chuí	ASD	3.500	45

Tug info

Operator	Name	Type	Power (HP)	Bollard pull (ton)
WS	CNL Rubi*	AZAD	3.470	45,10
WS	Wezen	AZAD	5.000	65,30
	WS Scorpius	AZAD	5.000	64
Fire Fighting System				
*Class	Monitor Model	Capacity	Distance	Pressure
1	Cummins6BTA 5.9	600m ³ /h	50m	8bar

Shore Access

The Vessel must provide an adequate gangway for the access between ship and shore. This terminal is provided with a specific structure where the portable gangway should be placed. In some cases, when the portable gangway will not be safely placed in the designate area, another place can be evaluated.

To avoid time wasting, the Terminal advise the Vessel to let the portable gangway prepared, including the safety net, to be placed as soon as the vessel made all fast.

Berth Access

All crew members must know is prohibited while remain on Pier:

- **To use Cell phones;**
- **To use Cameras;**
- **To smoke;**
- **To drink and eat;**

There is only one way to access the berth area, on shore signposts show this way.

To leave the berth area, everyone must pass through the main gate, where a Terminal's employee will check if the person is allowed to leave this area.

Crew member, when NOT working, does not need to use self-protect equipment to go to shore however DOESN'T remain on operational area.

At the Port of Paranaguá, there are support boats for the maneuvers, which are requested by the pilot. There are companies who provide this service.

The berthing and mooring operations are realized by the companies registered by Portos do Paraná Port Authority, under the pilot's guidance, this work is carried out 24 hours a day.

The berthing and mooring maneuvers are monitored by

4. Berth layout and general information

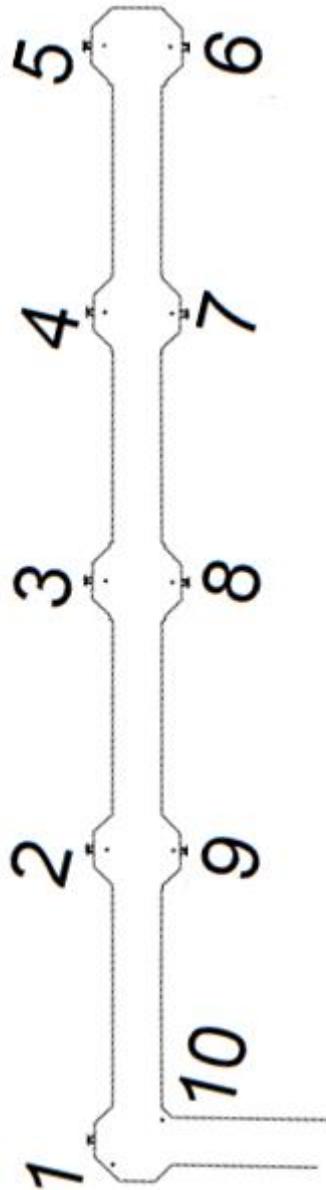
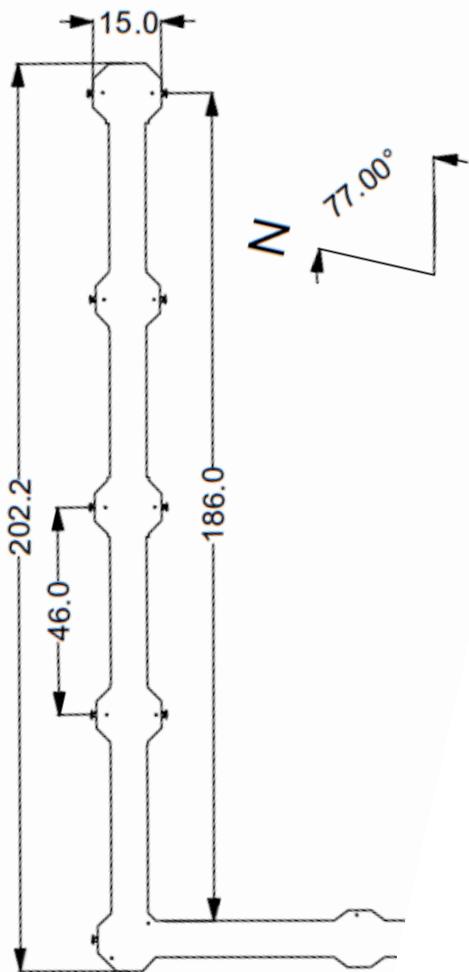


Figure 2 - Bollard Disposal



Lifting Equipment

This Terminal is not provided with lifting equipment, the vessel must use its crane to maneuver the portable gangway and cargo hoses.

Garbage Reception Facilities

Garbage disposal is available at this port. Contact Agent for more information

Potable Water

This service is NOT available from Cattalini Terminal wharf.

Slops and Ballast Reception Facilities

There are NO facilities at this wharf to deal with slops and ballast.

Bunkering Operation

It is NOT allowed to receive bunker while berthed.

Emergency Stop

During cargo operations, if for any reason it becomes necessary to stop cargo in any emergency, the requester should notify the other party by VHF radio, or any other means, requesting 'STOP, STOP, STOP'.

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

Loading/discharging of a ship must be interrupted in case:

- of fire or the outbreak of fire onboard, onshore, on another ship berthed.
- another ship passing at a distance considered hazardous,
- in case the communication system failure, or in any other situation putting the ship or Terminal at risk.

The operation may be interrupted where the wind gusts over **30 knots** and when there are **intense atmospheric electrical discharges**, at the discretion of the Terminal and/or ship.

In the event of a vessel ranging off the jetty causing damage to any equipment, the vessel will be held responsible and claims for repairs to damaged equipment will be made against the vessel owners.

6. Communications

Communications During Operations

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

At this terminal will be used VHF radio, provided by the terminal. **At the end of the operation, the radio must be delivered to the terminal representative.**

In case of radio failure or low battery, a crewmember should alert shore staff immediately, so that a replacement radio or battery can be provided.

As a secondary mean of communication, the terminal suggests verbal communication. Shore staff can be found on the jetty and/or in the control room.

Identification of ship name and the terminal should always be included in communications to avoid any misunderstanding. For example: '< ship name > to < Cattalini (terminal name) >'.

7. Fire and Emergency Response

Emergency Alarm Signal

The alarms signals for the terminal are:

Emergency: intermittent blasting

If there is a fire, explosion, escape of toxic and/or flammable gases or liquids, or any other emergency, DO NOT hesitate to raise the ship's alarm and contact the terminal by shore radio tuned on channel 04.

Emergency Actions

ACTION – SHIP (EMERGENCY ON YOUR SHIP)

- ✓ Raise the alarm
- ✓ Stop all cargo operations and close all valves if discharging
- ✓ In case of fire, fight fire and prevent from spreading
- ✓ Inform berth
- ✓ Standby to disconnect hoses
- ✓ Bring engines to stand by
- ✓ Implement ship emergency plan

8. Safety and Security

Responsibilities for safe conduct of operations

- ✓ Cattalini Terminal Representative and Master of the ship berthed on this Terminal are both responsible for the operations safe conduct".
- ✓ Responsibilities for the safe conduct of operations are outlined in the Safety Letter.
- ✓ Before starting operations, ship and shore must have full understanding of the safety requirements set out in the Ship/Shore Safety Check List.

Personal Protective Equipment (PPE)

- ✓ PPE must be worn during all operations (from mooring to unmooring).
- ✓ Appropriate protective clothing and equipment should be worn by all personnel engaged in operations on board and ashore.
- ✓ Personal Floating Device (PFD) shall be used during the hose connection and disconnection or maneuvering at jetty area.

ACTION – SHIP (EMERGENCY ON ANOTHER SHIP)

- ✓ Rise de alarm
- ✓ Stand by
- ✓ Stop all cargo operations and close all valves
- ✓ Disconnect hoses
- ✓ Bring engines and crew to stand by ready to unberth

ACTION – BERTH (EMERGENCY ON A SHIP)

- ✓ Raise the alarm
- ✓ Contact ship
- ✓ Stop all cargo operations and close all valves
- ✓ Standby to disconnect hoses
- ✓ Standby to assist fire fighting
- ✓ Inform all ships in the vicinity
- ✓ Implement berth emergency plan

ACTION – BERTH (EMERGENCY ASHORE)

- ✓ Raise the alarm
- ✓ Stop all cargo operations and close all valves
- ✓ In case of fire, fight fire and prevent from spreading
- ✓ If required, stand by to disconnect hoses
- ✓ Inform all ships in the vicinity
- ✓ Implement berth emergency plan

Emergency Evacuation

The primary consideration in the event of fire, explosion, spill or other emergency at terminal will be the safety of personnel.

- ✓ **Primary Route:** It is the main access of the berth.
- ✓ **Secondary Route:** If the primary route is obstructed for any reason, we should use the vertical leader at the end of pier (east side). There are two rescue boats with capacity of 5 and 20 people.

Emergency Equipment

The firefighting equipment are located next to the shore manifold, where you can find: portable extinguisher, fire hoses and connections. In case of an emergency, do not hesitate to use them.

The International fire connection is located together with the firefighting equipment.

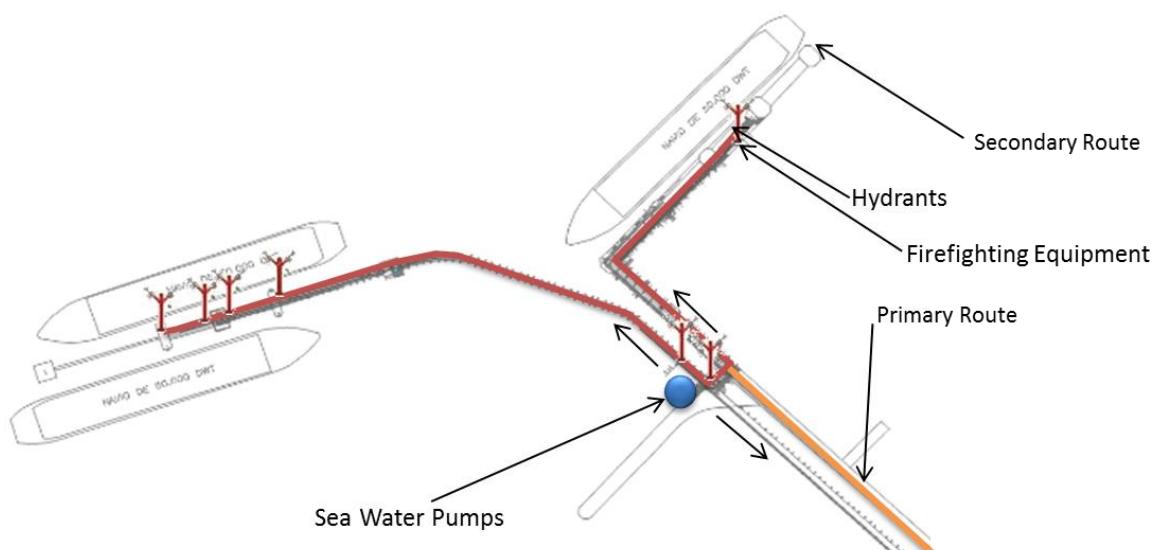


Figure 5 - Emergency Response

OPERATIONS ALONGSIDE

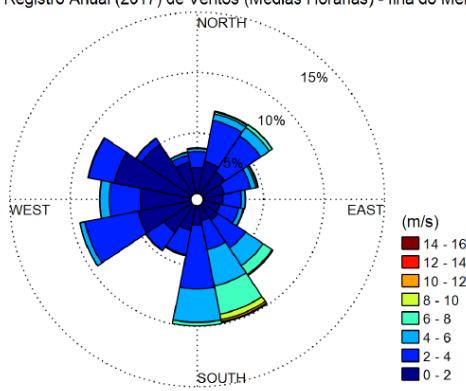
Hose Disconnection

On arrival at this facility, the ship will be presented with marine cargo hoses for discharge.

The Cattalini Shore Team is responsible for ensuring these cargo hoses are maneuvered and connected / disconnected safely and correctly.

The Cattalini Pier is located at Paranagua bay, sheltered by islands and Serra do Mar Mountains. No relevant swell and winds gust 40 knots during summer storms.

Registro Anual (2017) de Ventos (Médias Horárias) - Ilha do Mel



I- 2017 Annual Wind Data

9. Safety Requirements

Smoking

- ✓ Ashore IS NOT allowed to smoke;
- ✓ On board, smoking is only acceptable inside the accommodation at designated places as agreed with the Vessel Master (smoking notices specifying the designated places must be clearly posted).

Use of Matches and Lighters

At the berth area IS NOT allowed to carry matches, lighters, inflammable liquid or other similar sources of ignition.

Portable Electrical Equipment, including Phones and Pagers

Mobile phones or camera's is NOT PERMITTED inside cargo operations area, onboard and ashore, which have to be always SWITCHED OFF.

Electrical Storm

The ship must ensure that all cargo transfer operations WILL BE STOPPED in the event of an approaching electrical storm, advising the Cattalini loading master before if it was not requested by him in advance.

All tank openings, vent outlets, cargo and manifold valves will be closed until such time as the storm has passed.

In case of operating with a non-flammable product, the action to stop the operation will be done if the ship and/or shore staffs are in a dangerous situation.

Wind Criteria

Stop the pumping	30knots
Disconnect	35knots
Unberth	40knots

Oil Transport

All vessels that carry oil must be in accordance with the requirements established in the Maritime Authority's Regulation for Vessels in Open Sea Operations – NORMAM 01 – Chapter 5, "STATEMET OF COMPLIANCE FOR OIL TRANSPORT", this declaration must be submitted prior to berthing. Otherwise, berthing will not be allowed.

Environmental Protection

During the vessels calling, all scuppers and drip trays shall be effectively plugged and no leakage or spillage shall be allowed to leak overboard. In the event of a vessel spilling or leaking oil into the water, operations are to cease, immediate action is to be taken to prevent further pollution, and the Terminal Representative notified.

10. Applicable Terminal Regulations

The terminal operates on a 24-hour basis and 7 days a week. The Cattalini Shore Team is always on site and based it there.

Ullaging and Sampling

When it is not possible to undertake closed gauging and/or sampling operations, open gauging systems will need to be employed and the precautions detailed in ISGOTT must be adhered to.

The Master is requested to have adequate personnel and appropriate closed sampling and ullaging equipment available as a priority to facilitate this operation.

Inert Gas

When loading flammable products, Cattalini Terminal will use inert gas (N₂) only for pigging and hose blowing.

State of readiness of Main Engines

The main engines and other essential machinery of all vessels alongside must be maintained in a state of readiness for vacating the berth at short notice.

At all times vessels must be adequately manned for firefighting and vacating the berth in case of emergency. Either the Master or the Chief Officer must be always aboard whilst the vessel is alongside.

Maintenance and Repair Work Onboard

Repair work or immobilization of engines is prohibited on any vessel alongside the berth. In the event of any plant failure that immobilizes the vessel or stops the discharge of cargo, the Jetty Operator must be notified immediately.

Emergency repairs onboard, namely essential repairs needed to rectify malfunctioning equipment and prevent hazardous or unsafe conditions will be permitted subject to approval by Terminal Supervisor or his deputy.