

***Port Information***

***Ship-to-Ship Transfer  
Operation of Liquid Bulk  
Cargo  
(Double Banking Operation)***

## SUMMARY

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## 1. Introduction

Porto Sudeste do Brasil, located in Sepetiba Bay – RJ, is a logistics infrastructure dedicated to the safe, efficient, and environmentally responsible handling of solid and liquid bulk cargo. This document presents essential guidelines for conducting Ship-to-Ship (STS) operations in the Double Banking modality, serving as a reference for masters, nautical officers, agents, authorities, and other parties involved in maritime operations at the terminal.

Porto Sudeste's operations are guided by a strong commitment to sustainability, environmental preservation, social development, and ethical conduct, solidifying the terminal as a benchmark in efficiency, operational safety, and social and environmental responsibility.

The operational practices described in this document follow the guidelines of the main entities in the international and Brazilian maritime industry, including the International Convention for the Prevention of Pollution from Ships (MARPOL), the Oil Companies International Marine Forum (OCIMF), the International Safety Guide for Oil Tankers and Terminals (ISGOTT), the Ship-to-Ship Transfer Guide, Maritime Authority Standards, the Port Captainty Standards and Procedures (NPCP), and other regulations issued by the Brazilian Navy, ensuring that all operations, especially STS activities, meet the highest standards of safety, operational integrity, and environmental protection.

### Our Mission

Foster safe, sustainable, efficient and innovative logistics solutions for the movement of solid and liquid bulk materials.

### Our Vision

To be a global benchmark in bulk logistics, recognized for our commitment to sustainability, safety, and innovation.

### Values

- Respect to life
- Social and environmental commitment



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- Collaboration and empathy
- Sense of ownership
- Integrity

This document is available for download at the following address: <https://www.portosudeste.com>

Porto Sudeste also operates with ships that transport solid bulk cargo. The operational interface between ore carrier and oil tanker operations is established and managed within safety standards.

The information presented here is intended to complement and guide, and therefore in no way replace or alter any type of laws, instructions, guidelines, or official publications, whether national or international, including and especially those of the Brazilian Maritime Authority.

Porto Sudeste reserves the right to change any of its operational characteristics presented here without prior notice.

## 2. Communications and Contacts

### SHIP-TO-SHIP MANAGEMENT

The STS operation is managed by the Ship-to-Ship department of Porto Sudeste. Any requests and/or emergencies related to this operation should be reported to the contacts below:

- STS Manager – Victor Pessoa, [victor.pessoa@portosudeste.com](mailto:victor.pessoa@portosudeste.com), phone: +55 21 99951-6168.
- Mooring Master – João Nascimento, [joao.nascimento@portosudeste.com](mailto:joao.nascimento@portosudeste.com), telephone: +55 21 96997-0157.



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**PORTO SUDESTE DO BRASIL S/A – LPS (*Local Port Service*)**

Phone: +55 (21) 96926.0713 / +55 (21) 3609.5992

Email: dl-localportservice@portosudeste.com

VHF: Channels: 14 and 16;

**PORTO SUDESTE DO BRASIL S/A – COSE (*Corporate Safety Operations Center*)**

Phone: +55 (21) 98883-3390 / +55 (21) 3609-5981

Email: gse@portosudeste.com

VHF: Channel 16.

**BRAZILIAN NAVY**

Phone: (55 + 21) 2680 7303/2680 7024

Fax #: (55 21) 2680 7025

E-mail: secom@dlitacur.mar.mil.br

VHF: Channel 16

**PILOTAGE OFFICE**

Phones and Fax: (55 + 21) 2789 1278/2789 1344/8483 2043/8483 2044

Email: pilots@riopilots.com.br / atalaiamangaratiba@praticagem-rj.org.br

VHF - Channel 16;

**COMPANHIA DOCAS DO RIO DE JANEIRO - CDRJ - Port Authorities**

Phone: (55 +21) 3781 2161/3781 2162/3781 2163/7723 3809

VHF: channel 16

**3. Emergency Procedures**

**3.1. General (Alarms, contacts, description of pollution response equipment, safety equipment, maps and locations)**

During operations, ships shall maintain their emergency response plans in state of readiness in coordination with the Terminal. The terminal is responsible to assist the master in operation management.



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Upon detection of an emergency, all parties involved, including ships and the terminal, must be notified via radio communication. In the event of a radio communication failure, the audible alarm must be activated, emitting five or more short beeps to indicate an emergency situation. The pumping operation must be stopped immediately.

Porto Sudeste maintains a solid emergency response structure, comprised of the Corporate Safety Operations Center (COSE) and the Emergency Response Center (CAE), responsible for coordinating and executing contingency actions during STS operations.

**Primary contact:** The Mooring Master is responsible for initially activating the COSE via the number 0800 122-1234, whenever any event is identified that compromises personal, operational, or environmental safety.

**Backup contact:** Mooring Master may also contact Porto Sudeste Boarding Inspection department via VHF 11/14/16 in case of failure in direct communication with COSE.

Roles of Response Centers:

- **COSE:** It receives and records the incident, filters the information, activates internal and external resources, notifies the relevant departments, and mobilizes the CAE (Emergency Response Center).
- **CAE:** Operational base equipped for immediate response to emergencies. Coordinates teams, vessels, barriers, environmental resources, and operational safety.

All response actions follow the Port's emergency response plans: PEI (Individual Emergency Plan) and PECIP (Fire and Panic Emergency Plan).

Porto Sudeste has resources located at Pier and offshore, which guarantees an immediate response to any accident.

**Resources located on the Pier:**

- 1500 meters of oil boom, with 1000 meters of 9 inches, and 500 meters of 12 inches;
- 1500 meters of absorbent booms (containers at berth 2).
- 16 inflatable floating tanks with a capacity of 15 m<sup>3</sup>;



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- 4 dual bioblue mitigation kits.

#### **Resources located offshore:**

- 1 Tank barge with a capacity of 191 m<sup>3</sup>;
- 5 inflatable floating tanks with a capacity of 15 m<sup>3</sup> each located on board the tank barge;
- 1 blower kit with hoses for inflating the floating tanks;
- 11 dual bioblue mitigation kits on board the tank barge.

#### **Technical Reserve located in the Sepetiba Quarry:**

- 1500 meters of oils booms, being 500 meters of 12 inches and 1000 meters of 9 inches.
- 1500 meters of absorbent booms.

In addition to its own resources, Porto Sudeste has resources located at the Emergency Response Center (CAE) as detailed in the Individual Emergency Plan (PEI), which minimizes mobilization time once a spill has been detected. In the case of accidents with response that demands resources additional to those existing locally, Porto Sudeste may resort to the equipment and materials provided by the Mutual Assistance Program of the Itaguaí Port Complex.

For fire/explosion scenarios, the Porto Sudeste Fire and Panic Emergency Plan (PECIP) addresses various mitigating and preventative measures, including human and material resources for health and first aid.

In addition to portable fire extinguishers scattered throughout the pier, the Port has a fixed water network with a main diameter of 8 inches with branches to double hydrants with 2.5-inch outlets.

For Ship-to-Ship operations, in addition to portable and fixed fire extinguishers, a fire truck will be available for immediate response. A fire-fighting tugboat will also be on standby in the vicinity of the transfer point in case of any incident.

At Porto Sudeste, there is a siren alarm system distributed throughout the terminal for use in emergency situations, as described below:

**Alarms:**

- Warning: 30s/30s modulated signal – Interrupt activities;
- Emergency Start: modulated signal 1 min / 1 min –
- Abandonment: a long, continuous signal.

**3.2. Oil spill and release of vapors/gases**

In the event of an oil spill on board the vessel, the SOPEP shall be activated. If oil is spilled into the sea, the Terminal must activate its Individual Emergency Plan, which comprises personnel, equipment, and materials.

Immediate actions:

1. Interrupt operation (command via VHF + coordinated valve closure);
2. Depressurize the lines and isolate the source of the leak;
3. Activate the SOPEP Kit (for deck spills) and/or the BioBlue Mitigation Kit (for overboard spills);
4. Notify COSE/CAE;
5. Activate PEI/PAE, according to severity.

In the event of a leak of vapor or gases from the cargo, the following actions should be taken:

1. Interrupt operation;
2. Communicate with the other ship and the terminal;
3. Identify the gas leak point;
4. Control pressure in the tanks until equilibrium is re-established in the steam recovery system;
5. Check if it is necessary to interrupt the operation of the solid bulk handling system.

The operation must be carried out using a vapor/gas recovery system between the ships, which must be connected with a specific hose for this vapor/gas transfer.

### 3.3. Fire and explosion

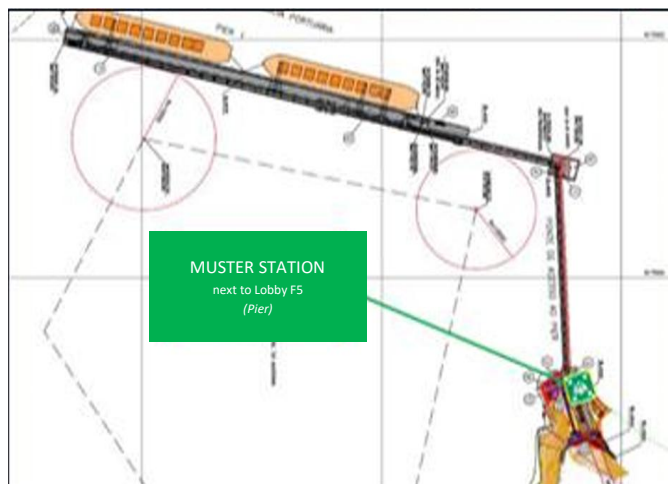
The procedure to be followed in the event of a fire and explosion consists of:

1. Immediately stop all cargo operations;
2. Shut down cargo and ballast pumps and close all relevant valves, ensuring the transfer system is safely isolated;
3. Each vessel shall initiate onboard fire-fighting measures using its own equipment and resources;
4. Porto Sudeste shall activate the PECIP;
5. Porto Sudeste shall ensure the availability of a fire truck for immediate response, and a fire-fighting tug shall remain on standby in the vicinity of the terminal.

### 3.4. Evacuation (evacuation route and muster station map)

In the event of a ship evacuation, the Muster Station is at the tunnel exit. At the jetty, a headcount of all crew and passengers must be carried out, and under the guidance of the Mooring Master, follow the marked route to the muster station.

For berthed ships, evacuation will be carried out via the fastest means (gangway), while for the ship on the opposite side it will be done using the terminal's service boats.



### **3.5. Collision/damages to berth**

Ship maneuvers are carried out under satisfactory environmental conditions and always using the resources of the pilotage service and tugboats.

The procedure to be followed in this case consists of:

1. Assess damage to people, ship, berth, equipment, and the environment;
2. Activate the Porto Sudeste Emergency Response Plan (PAE or PECIP), if necessary;
3. Immediately notify the relevant Authorities;
4. Ships shall promptly notify their P&I Club.

### **3.6. Medical emergency**

For any medical emergency, the Occupational Health and Safety team at Porto Sudeste should be contacted, as recommended by PECIP. The terminal maintains medical resources for first aid, with an ambulance and paramedics. If necessary, the victim is referred to the region's network of hospitals.

### **3.7. Security**

In case of changing security level, the operation must be interrupted and the terminal notified.

COSE will take the necessary steps until the operation is cleared and resumed.

### **3.8. Man Overboard**

During maneuvers and operations, service boats and man-overboard rescue resources are available for the immediate recovery of a person who falls into the water. Therefore, this scenario is part of the PECIP (Emergency Action Plan) for Porto Sudeste, which must be activated when it occurs.

### **3.9. Ship experiencing problems or adrift near the jetty.**

Ships maneuvering near berths are always assisted by pilotage and tugboat services. There is no systematic passage of ships offshore.



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In the event of a malfunction or problems with a ship adrift near the terminal berths, Porto Sudeste must be notified immediately.

Pilotage and tugboat services should be activated in an emergency.

### **3.10. Emergency Unberthing**

The ship should be capable of immediate unberthing in cases of emergency, taking into account that the support of tugs is mandatory.

Repairs to the machine and/or other repairs to the ship that may hinder emergency unberthing are not allowed. In the event of emergency repairs, Porto Sudeste and the Port Authorities must be notified in advance.

### **3.11. Incident reporting policy**

Any incident or accident during operations must be reported to the terminal immediately.

Porto Sudeste will activate its communication network according to its Emergency Response Plan (ERP) and Fire and Panic Emergency Plan (FEP).

## **4. Health and Safety and Security Policy**

### **4.1. Requirements for the use of Personal Protective Equipment - PPE**

In all operational areas, everyone must always use PPE. Considering the Risk Analysis Study, the basic equipment is:

- Protective clothes: trousers, or coveralls;
- Goggles;
- Safety helmet and ear protection;
- Safety gloves;
- Safety boots;
- Raincoat;
- Gas detector (including H<sub>2</sub>S);
- Life Jackets.



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#### 4.2. Accessing the terminal/crew to onshore/visitors to the ship

Access to the terminal for crew, visitors, and service providers is governed by the **ISPS Code** and other Brazilian regulations.

The crew will not be allowed to disembark before receiving sanitary clearance from ANVISA.

Only the **Pilot** may embark and disembark before the granting of Free Pilotage.

Crew members/passengers must use full PPE when accessing the terminal.

The Ship/Agency must inform the Ship-to-Ship department in advance and complete the **Arrival Information** form.

The terminal provides a service boat for embarking/disembarking on the outer vessel, it is subject to service boat availability. To check the availability of the service boat contact the Ship to Ship department.

The agency is responsible for requesting and coordinating the travel of crew members who wish to go ashore. The terminal assumes no responsibility for these crew members.

#### 4.3. Ship/Terminal Asset Security Interface (Security Statement – DOS)

Porto Sudeste fully complies with the ISPS Code and operates, by default, at **Protection Level 1**. In the event of a level rise, the **PFSO** will notify the ship's **SSO** to implement equivalent measures on board. A **Security Statement (DoS)** can be issued upon request.

ISPS Safety Levels:

- Level 1 – Normal: standard measures applied continuously;
- Level 2 – High: implementation of additional measures due to increased risk;
- Level 3 – Exceptional: extraordinary measures for an immediate or specific threat.

Safety information may be exchanged during the pre-transfer conference.

#### Terminal Safety Activities (ISPS)

- Controlling access of people to the ship and operational areas;
- CCTV monitoring the mooring area and surroundings of the ship;



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- Control of the delivery of provisions to the ship;
- Control of the embarking/disembarking of people and their belongings;
- Maritime patrols to board the ship, when necessary.

#### **Crew and Third-Party Personnel Movement**

- Disembarkation is subject to prior authorization. Movement on foot within the terminal is strictly prohibited. Transportation must be arranged by the shipping agency, as the terminal does not provide vehicles for crew or passenger transfer.
- Departure/return subject to personal and belongings inspection;
- Goods acquired onshore can only be shipped with proof from the Federal Revenue Service.

#### **Prohibitions and Special Conditions**

- Alcoholic beverages, drugs, and animals are prohibited inside the terminal;
- Ship-to-ship operations without prior authorization are prohibited.
- The use of polypropylene big bags for food and non-hazardous materials is mandatory, when authorized by the Terminal.

#### **Access Control**

- Terminal fully isolated;
- Access controlled by electronic card;
- On-site patrols and 24-hour CCTV monitoring.

#### **CCTV – Operational Privacy Policy**

Porto Sudeste may install **CCTV focused exclusively on the sea side**, without capturing images from the deck. Installation and removal are carried out by the in-house team, at no cost to the ship.

#### ISPS Contacts for Porto Sudeste

|                                    |   |  |
|------------------------------------|---|--|
| LEONARDO SANTOS DA SILVA<br>(PFSO) | 55 (21) 97279-4869                      | <a href="mailto:leonardo.silva@portosudeste.com">leonardo.silva@portosudeste.com</a> |
| COSE (SECURITY CENTER)             | 55 (21) 98883-3390<br>55 (21) 3609-5981 | <a href="mailto:gse@portosudeste.com">gse@portosudeste.com</a>                       |
| CESPORTOS/RJ                       | 55 (21) 2203-4695                       | -  |

#### 4.4. Alcohol and drug policy

The IMO, OCIMF, and the Federal Government reinforce the obligation to establish policies and programs to control and prevent the use of alcohol and drugs on board ships and, consequently, among all personnel involved in the operation.

A **Zero Alcohol and Drugs** policy is adopted. It is forbidden to enter the terminal while carrying alcoholic or illicit substances, as well as while under their influence. Porto Sudeste conducts random alcohol and drug tests to ensure compliance with this policy.

#### 4.5. Smoking

During the stay of tankers at the Porto Sudeste facilities, smoking is permitted only in designated smoking areas, both on board the ships and in the terminal..

#### 4.6. Portable electronic devices and open lights

All portable electronic equipment used in open and classified areas must be intrinsically safe. The flashlights must also be intrinsically safe and properly approved for use in areas with fire and/or explosion hazards.

#### 4.7. Repairs berthed/moored - machine condition ready to operate

Repairs that could pose risks to operations or the environment are prohibited during STS operations.

Hot work is not permitted during STS operations and may only occur with formal authorization from the terminal and competent authorities.

Work at height or in confined spaces is not permitted during STS, except in emergencies.

#### 4.8. Onboard supply

The delivery and/or receipt of supplies must be authorized by the Corporate Security Sector and coordinated by the ship's agency. The Ship-to-Ship department should be informed in advance.

Customs clearance is mandatory for any item brought on board.

Receipt of lubricating oil and/or provisions and removal of waste must be reported to the terminal during the **Pre-exchange information** phase using the **Arrival Information form**.

#### 4.9. Material Safety Datasheet

All operations involving petroleum and byproducts must have a Material Safety Data Sheet (MSDS) corresponding to the product to be transferred, in the standard IMO format.

The ship responsible for the cargo must forward the contents of the MSDS to the terminal and the Mooring Master, ensuring that all relevant safety information is understood.

The Mooring Master (MM) must analyze the MSDS and inform all those involved about the risks and preventive measures, paying special attention to the presence of Benzene and H<sub>2</sub>S (hydrogen sulfide gas), where applicable.

#### 4.10. Benzene and Hydrogen Sulfide (H<sub>2</sub>S)

The operation must strictly follow the MSDS guidelines and the safety instructions provided by the MM during the pre-operational briefing.

Exposure to benzene and H<sub>2</sub>S can occur primarily during:

1. Connecting and disconnecting the hoses;
2. Collection of samples;
3. Vacuum/pressure valve opening.

For products with the potential to emit H<sub>2</sub>S, the use of properly calibrated portable detectors, positioned at chest height during deck activities, is mandatory.

The alarm on H<sub>2</sub>S detectors should be set to 5 ppm v/v, as this is the immediate action limit.

If there is a possibility of concentrations above 5 ppm (according to the MSDS), a Preliminary Risk Analysis (PRA) must be performed and a specific procedure adopted to ensure the safe continuation of operations.

Self-contained oxygen supply equipment (suitcase type) must remain immediately available in the risk areas defined in the JPO.

The operation must be stopped and the MM notified immediately if the following is detected:

1. Odor or suspicion of a gas leak;
2. Detector alarm;
3. Any indication of a hazardous atmosphere.

#### **4.11. Static Electricity**

Because of differences in electrical potentials between ships, there is a risk of arcing on the manifold during connection and disconnection of the hose between ships. To protect against this risk, means of electrical isolation should be provided at the ship/ship interface. As a rule, the insulating flange should be used in the hose lines as recommended by ISGOTT, including in the vapor hose recovery line, or suitable hose lines should be used to absorb the effects of static electricity.

## **5. General Information**

### **5.1. Location and layout of Porto Sudeste**

Porto Sudeste is located in Ilha da Madeira, Sepetiba Bay, City of Itaguaí, State of Rio de Janeiro, Brazil, at Rua Félix Lopes Coelho, n° 222. It is located to the northeast by mountain range Serra do Mar, north by Serra da Madureira, southeast by Maciço da Pedra Branca, and south by Restinga da Marambaia.

The terminal has a pier with two berths at the following coordinates:

**Berth 01: Lat.: 22 ° 55 '45 "S and Long.: 43 ° 51' 28" W**

**Berth 02: Lat.: 22 ° 55 '56 "S and Long.: 43 ° 51' 31" W**

**Berth 02:**  
Lat.: 22 ° 55 '56 "S  
Long.: 43 ° 51' 31" W

**Berth 01:**  
Lat.: 22 ° 55 '45 "S  
Long.: 43 ° 51' 28" W



The Port is strategically located in the state of Rio de Janeiro, approximately 80 nautical miles from the Santos Basin. It is located approximately 10 kilometers from the city of Itaguaí and 80 kilometers from the city of Rio de Janeiro, with easy access via the BR-101 highway, which connects both cities. The following nautical charts should be used to navigate Sepetiba Bay to approach Porto Sudeste.

**Brazilian Navy's Nautical Charts:**

**1620** – From Pontal de Sernambetiba to Ilha Grande, **1623** - Port of Itaguaí.

**Waterway access:**

Maritime access to Porto Sudeste is via Barra de Sepetiba, located between Ponta dos Castelhanos (Ilha Grande) and Ponta Grossa (Restinga da Marambaia). From the entrance to the harbor, the vessels travel approximately:

- 16 km to Ilha Guaíba;
- a further 22 km along the main channel, which is 206 m wide and dredged to a depth of 20.00 m.

These conditions allow for the safe passage of large ships, following a controlled navigation regime and one-way traffic. Navigation laws must be followed in accordance with COLREGs, NPCPs and NORMAM.

### **Main Canal**

The main access canal includes:

- Width: 206 m
- Depth: 20,00 m (referring to the hydrographic zero DHN)
- Authorized draft: 18,30 m by Port Authority
- Traffic: one-way
- Typical transit time: approx. 2.5 hours for entry or exit

The flow is coordinated by the Pilotage service and the Port Authority, and adjustments may be made to allow crossings by repositioning vessels in the anchorage area.

### **Access Canal to Porto Sudeste**

After crossing the main channel, access to Porto Sudeste begins near Buoy 14, heading northeast.

Characteristics:

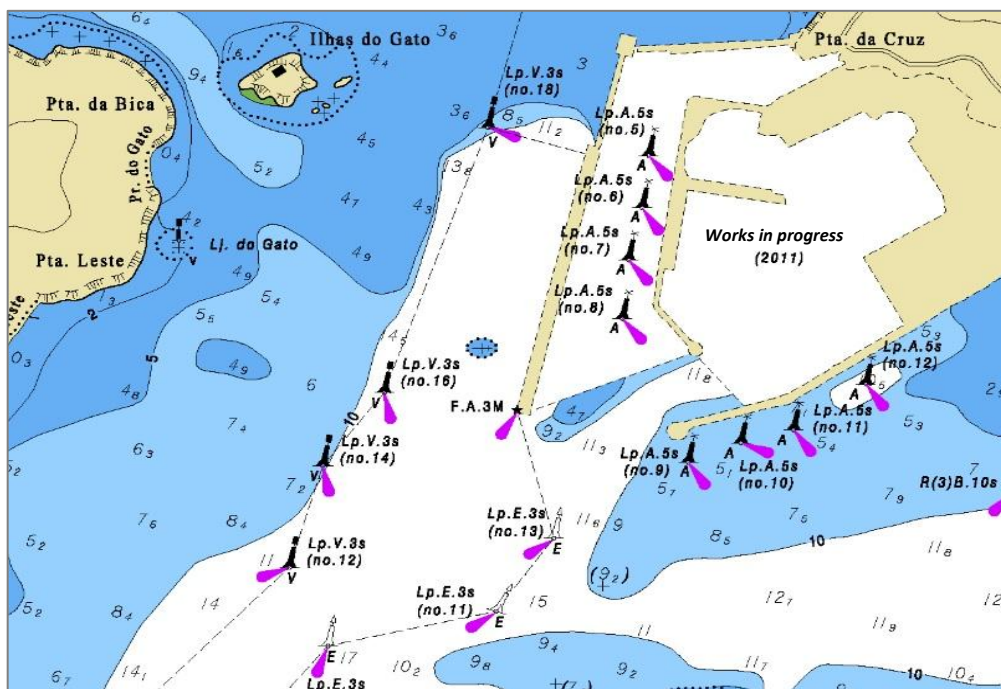
- Extension: 3.5 km
- Width: 206 m
- Depth: 20.00 m
- Crossings: prohibited during mooring or unmooring maneuvers.

All maneuvers are coordinated by the Pilotage service, in alignment with the Local Port Service (LPS) of Porto Sudeste.

## Evolution Basin

The turning basin has a depth of 20 meters and a diameter of 600 meters, and is defined by the coordinates and corresponding section on the nautical chart shown below.

| POINTS | COORDINATES |            |
|--------|-------------|------------|
|        | N           | E          |
| PT-01  | 7464159.452 | 616872.739 |
| PT-02  | 7464076.674 | 617197.735 |
| PT-03  | 7463307.408 | 616558.915 |
| PT-05  | 7463335.347 | 617008.862 |
| PT-06  | 7463194.271 | 616448.092 |
| PT-07  | 7462940.091 | 617078.43  |
| PT-08  | 7462911.228 | 616382.607 |
| PT-09  | 7462776.286 | 616912.428 |
| PT-10  | 7462603.614 | 616376.604 |
| PT-11  | 7460012.342 | 614497.855 |
| PT-12  | 7459757.476 | 614551.378 |
| PT-13  | 7459485.482 | 613816.358 |



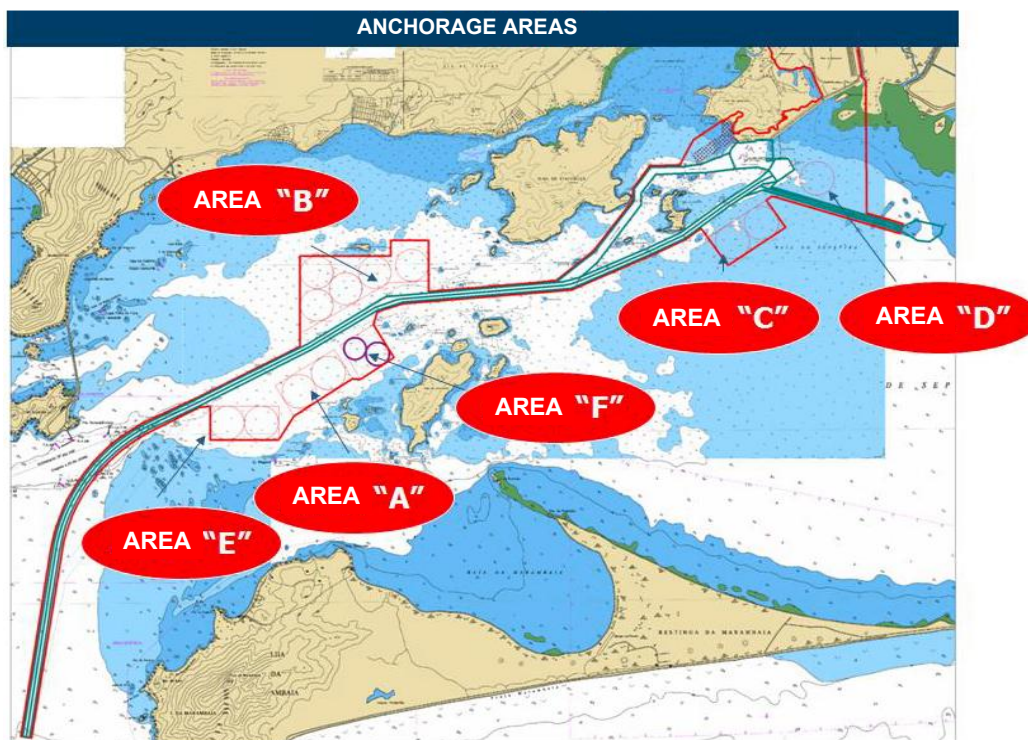
#### Water density:

From 1,020 to 1,023 kg/m<sup>3</sup>.

**Note:** At some times of the year, seawater density has little variation.

#### Anchorage areas:

There are 14 internal anchorages in Sepetiba Bay, organized into six areas, as can be seen in the figure below.



The Maximum drafts duly allowed by the maritime authorities in the anchorage areas are:

**Area A:** 12.8 m; **Area B:** 11.8 m; **Area C:** 07.1 m; **Area D:** 06.5 m; **Area E:** 10.5 m; **Area F:** 11.2 m

### 5.2. Opening hours and time zone

The terminal operates 24 hours a day, 7 days a week, according to the operational schedule, availability of pilots and tugboats, and meteorological and oceanographic conditions.

The time zone is GMT-3.

### 5.3. Communication between ship and Porto Sudeste

After approval in the acceptance and vetting process, the Ship-to-Ship department sends the vessel the *Pre-Arrival Information Exchange* containing essential instructions regarding the port, the

designated berth, operational requirements, and safety procedures. This communication is done via email.

➤ **VHF channels applicable to operations:**

- Channel 16 – continuous listening and emergencies;
- Channel 13 – maneuvers (approach, mooring and unmooring);
- Channel 11 – operation (pre-pumping, pumping and post-pumping / STS).

#### 5.4. Language used in Porto Sudeste

The standard language for conducting operations is operational maritime English, in accordance with ISGOTT guidelines and the Ship-to-Ship Transfer Guide. Operational documentation is conducted in English, with Portuguese support provided when necessary.

#### 5.5. Ship vetting and acceptance conditions

Vessels intended for Ship-to-Ship (STS) – Double Banking operations at Porto Sudeste must provide, in advance, all operational, technical, and documentary information necessary for operation planning, vetting and compatibility analysis.

#### Vetting Analysis

The Client must send, up to 7 calendar days before the operation, by means of an agent/representative, the following documents:

- Q88 updated;
- SIRE/CDI updated;
- General Arrangement;
- Manifold Arrangement;
- Mooring Arrangement;
- Class Status Report;
- SOPEP Plan;
- STS Plan;
- Ship Sanitation;
- IOPP (Internation Oil Pollution Prevention) Certificate.

### **Compliance Conditions and Certifications**

- P&I coverage by member club of the International Group of P&I Clubs;
- Compliance with ISM, ISPS, SOLAS, MARPOL;
- On board: SMC/DOC (ISM), ISSC, IOPP;
- Mandatory classification by a Classification Society that is a member of IACS and a SOPEP/STS Plan approved by the Class.
- SIRE/CDI inspection within the 6-month deadline;
- Q88 within 30 days;
- Class Status report within 14 days;
- Ship Sanitation - issued less than 6 months ago

### **Minimum equipment requirements**

- Operational Inert Gas System ( $O_2 < 8\%$ );
- Machine ready (propulsion available);
- Spyglasses compatible with the Mooring Equipment Guidelines 4th Edition - MEG4 publication;
- Crane SWL  $\geq 10$  t;
- Two operational gangway ladders;
- Buoys with lifelines;
- Operational alarms and VHF radio;
- Gas detectors ( $O_2$ ,  $H_2S$ , benzene, explosimeter).

### **Compatibility Analysis:**

- All vessels will be subject to compatibility analysis in accordance with the 2025 Ship-to-Ship Transfer Guide Edition;

- Processing time: up to 72 consecutive hours after receiving all required documentation;
- The vessels will be accepted after a compatibility analysis.

## 5.6. Environmental Conditions

### Meteorology

The region's weather is tropical with an average humidity of 77%, average atmospheric pressure of 1,010 MPa, average temperature of 23.5 °C. During the summer season (January and February), the maximum temperature can reach above 40 °C and the minimum in winter reaches 15 °C.

Average rainfall in summer is 200 mm and 10 days of rain per month. On average, in winter the precipitation is 100 mm and 8 days of rain per month.

The predominant winds during Spring and Summer are NE and NW and SW during Fall. The speed range varies between 6 to 14 knots. Short gusts can occur reaching 17 knots in Summer and 35 knots in Winter mainly at dawn.

Fog can occur in Winter season during the early morning and early morning hours. The table below shows the impact of the winds on Guaíba Island on the location of the closest measurement to Porto Sudeste:

| MONTHS | MAXIMUM SPEED (AVERAGE) |       | AVERAGE SPEED |       | PREDOMINANT DIRECTION |
|--------|-------------------------|-------|---------------|-------|-----------------------|
|        | m/s                     | knots | m/s           | knots |                       |
| JAN    | 2.78                    | 5.39  | 0.89          | 1.72  | W                     |
| FEB    | 4.39                    | 8.52  | 0.89          | 1.72  | S                     |
| MAR    | 2.31                    | 4.47  | 0.86          | 1.67  | S                     |
| APR    | 2.5                     | 4.85  | 0.81          | 1.56  | W                     |
| MAY    | 2.22                    | 4.31  | 0.78          | 1.51  | W                     |
| JUN    | 3.42                    | 6.63  | 0.81          | 1.56  | W                     |
| JUL    | 3.36                    | 6.52  | 0.89          | 1.72  | W                     |
| AUG    | 3.69                    | 7.17  | 0.94          | 1.83  | S                     |
| SEP    | 2.53                    | 4.9   | 1.08          | 2.1   | S                     |
| OCT    | 3.97                    | 7.71  | 0.92          | 1.78  | S                     |
| NOV    | 2.25                    | 4.37  | 0.78          | 1.51  | S                     |
| DEC    | 3.06                    | 5.93  | 0.89          | 1.72  | S                     |

Local Port Service (LPS) continuously monitors meteorological and oceanographic conditions during operations, including wind, visibility, current, and tidal conditions. Direct communication with the LPS must be maintained via VHF channels 11, 14, and/or 16.

## 6. Information on Berths and STS equipment

Porto Sudeste has two berths with the same construction and operational characteristics - berths 01 and 02.

### 6.1. Pier and Berths Dimensions

The Porto Sudeste's pier has a total length of 766 meters, divided into two berthing berths, each 383 meters long. The structure is 35.50 meters wide and is equipped with 27 Sumitomo conical fenders, installed along the berthing side with an average spacing of 28.8 meters between them.

The operational depth along the berths is 20.00 meters, referenced to hydrographic zero (DHN), allowing it to receive large ships. Considering the tide to be "zero", the height between the water surface and the top of the pier platform is 6.50 meters.



### 6.2. Description and Parameters

Depth = 20 m

Maximum Applicable draft for VLCC at half load = 16.0 m

Maximum draft applicable to Suezmax, Aframax and LR = 17.2 m

Minimum Freeboard = 5.4 m



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Maximum Length = 340 m

Maximum breadth = 61 m

Minimum Superstructure Offset = 2m

Offset Manifolds = 5m

Deadweight = 320,000 t

Displacement: 275,000 t

Maximum Air Draft = 21.5 m (applicable for solid bulk).

### 6.3. Handled Products

The products handled during STS operations are petroleum and byproducts.

### 6.4. Operational conditions for cargo transfer

Hoses used in Ship-to-Ship (STS) operations at Porto Sudeste are classified into two main categories:

- Loading/unloading hoses
- Vapor recovery hoses

The maximum operational flow capacity is **11,820 m<sup>3</sup>/h**, which may vary according to the operational conditions of each ship, respecting the construction and safety limits of each vessel. During the pre-operational meeting, pressure and flow parameters are verified and validated between the ships involved and the Porto Sudeste team.

During cargo transfer, it is mandatory to control emissions of vapors/gases generated by the dynamics of the operation. The release of these vapors into the atmosphere must be avoided, requiring the use of specific hoses for vapor/gas recovery between ships.

Porto Sudeste offers three 12-inch cargo hose lines, each composed of three 9.1-meter hoses, totaling 27.3 meters per line. In addition, it provides a 16-inch steam hose line, also composed of three 9.1-meter hoses, resulting in a total length of 27.3 meters.

## Technical Specifications of the Hoses

### 1. Cargo Hoses

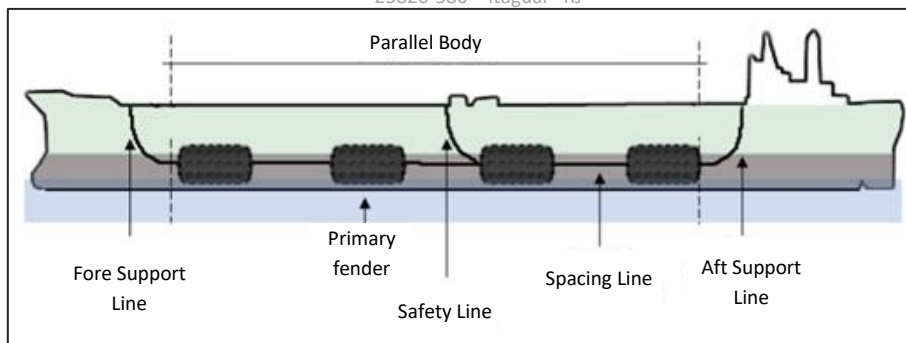
- Rated diameter (DN): 12 inches;
- Length: 30 feet;
- Working pressure: 15 bar;
- Flow Rate:  $3,940 \text{ m}^3/\text{h} \times 3 = 11,820 \text{ m}^3/\text{h}$ ;
- Type: Yokohama Seaflex Grade  $\Omega$  STS Hose;
- Application: STS operations for loading and unloading oil and petroleum products;
- Electrical conductivity: Semi-continuous;
- Flow speed: 15 m/s;
- Approximate weight: 631 kg;
- Flanges: ANSI B16.5, flat face, on both ends.

### 2. Vapor/Gas Recovery Hose

- Rated diameter (DN): 16 inches;
- Length: 9.1 meters;
- Working pressure: 10 bar;
- Vacuum resistance: 0.7 bar (room temperature);
- Application: Recovery of vapors/gases in STS operations;
- Electrical conductivity: Continuous;
- Approximate weight: 60 kg/m;
- Flanges: ANSI B16.5, flat face, on both ends.

## Technical Specifications of the Fenders

The fenders used on the sides of the ships involved in the STS operation are of the pneumatic type, Yokohama model or equivalent, manufactured according to ISO 17357 standard. They are sized according to the displacement of the vessels and installed according to the previously defined mooring plan, ensuring adequate protection of the entire parallel side of the smaller ship.



## 1. Primary fenders

- Type: Pneumatic, floating;
- Sizes: 6.40 m length x 4.50 m diameter;
- Starting pressure: 80 kPa;
- Berthing speed: 0.15 m/s;
- Guaranteed minimum absorption energy: 4,518 kN.m;
- Reaction force: 4,988 kN ( $\pm 10\%$ );
- Manufacturing standard: ISO 17357-1:2014;
- Equipment: Pressure relief valve, shackles and swivels at the ends.

## 2. Secondary fenders (Babys).

- Type: Pneumatic, floating;
- Sizes: 3,00 m length x 1.50 m of diameter;
- Starting pressure: 50 kPa;
- Berthing speed: 0.30 m/s;
- Guaranteed minimum absorption energy: 153 kN.m;
- Reaction force: 579 kN ( $\pm 10\%$ );
- Manufacturing standard: ISO 17357-1:2014;

- Equipment: Shackles and swivels at the ends.

### 3. Set of Fenders

- Composition: (2x) 2 interconnected primary fenders;
- Connection: High-strength synthetic fiber (HMPE) marine tagline;

### Technical Specification for the CMT JOFFRE Barge

The CMT JOFFRE Tank Barge is an unpowered and unmanned vessel, built in 2009, intended for the transport and storage of oily waste in the event of a product spill during STS operation. It has a capacity of 191 m<sup>3</sup>, a length of 24 meters, a beam of 12 meters, and a gross tonnage of 171 GT. The vessel fully complies with applicable international regulations and the guidelines established by the Brazilian Maritime Authority. In addition, it is used for transporting cargo and vapour hoses to ships.



### **6.5. Ship Crane Requirements**

The ship's crane must be capable of working with suspended loads, including handling its own hoses safely. The safe working load (SWL) value must be visibly printed on the crane's structure. The minimum capacity is 10 tons.

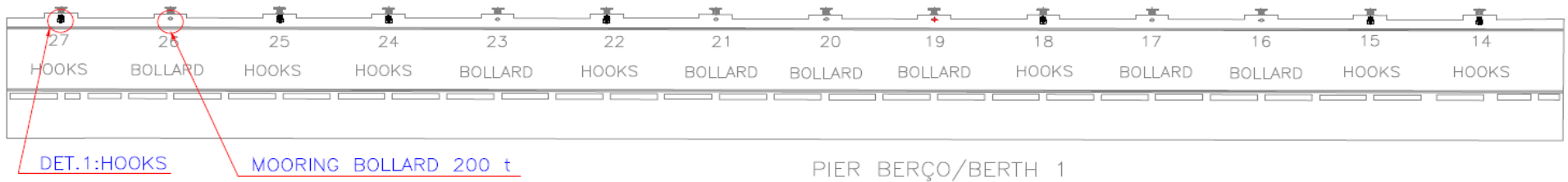
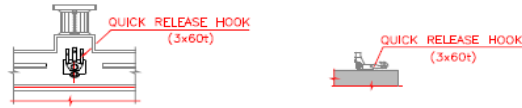
### **6.6. Safe Working Load (SWL) of mooring components**

#### **Berthing/Mooring Equipment**

Mooring pier has 27 mooring points containing 12 fixed bollards (200 t), 9 points with three quick-coupling hooks (3x60 t), 5 points with three quick-coupling hooks (3x125 t) and 1 point with 4 quick-coupling hooks (4x125 t), both equipped with an electric winch to move the ropes and/or mooring lines.

**Distribution of mooring equipment in berths 01 and 02:**

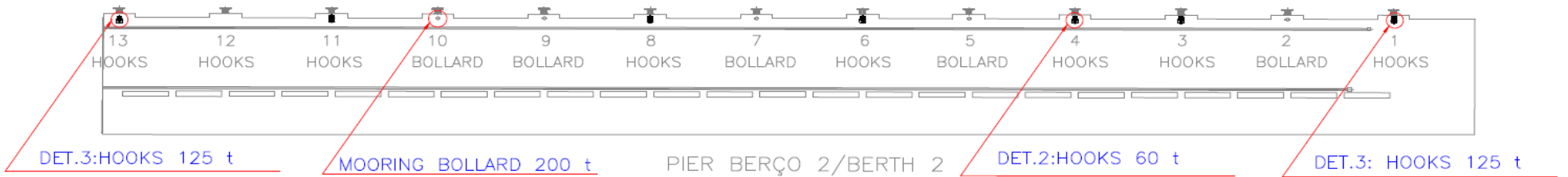
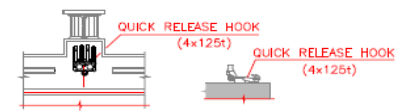
DET.1: HOOKS



DET.1: HOOKS 125 t  
 POSITION: 3;6;8;12;13

DET.2: HOOKS 60 t  
 POSITION: 4;11;14

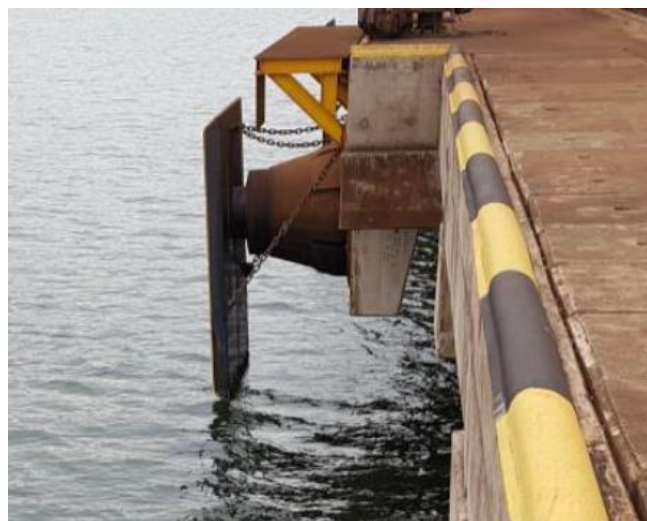
DET.3: HOOKS 125 t  
 ONLY IN POSITION 1



**Pier fenders:**

Along berths 01 and 02, there are 27 fenders positioned every 28.8 meters with the following characteristics:

- Sumitomo HyperOmega Conical Fenders – HOM1600H × 120.
- Minimum guaranteed energy (EMG): 2,256 kN·m (72.5% compression).
- Reaction force (max): 2,932 kN (72,5% compression)

**7. Information for ships before arrival****7.1. Operational conditions of the ships**

The following information must be provided to the terminal during the initial pre-operation communication:

- Load condition (loaded/ballast);
- Arrival and expected departure drafts;
- Charging outlets used;
- Maximum pumping rate;



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- Maximum pressure on manifold;
- Vapor recovery availability;
- Operating restrictions.

## 7.2. Pilotage

The presence of a Pilot is mandatory for all berthing and unberthing maneuvers at Porto Sudeste. All pilots who serve the Porto Sudeste are fully authorized by the Brazilian Maritime Authority. NORMAM 311 – establishes the requirements, duties and obligations regarding your service.

Ships anchoring for Porto Sudeste must wait for the pilot at the following latitude: 23 ° 08.39' S and Longitude: 044 ° 02.4' W

The operational base of Pilotage serving Porto Sudeste is located in the municipality of Mangaratiba, Rio de Janeiro State, and can be contacted by **VHF radio channel 16, 13 or 12** and phone numbers **+55 21 2789-1278, +55 21 2789-1344, +55 21 98483-2043 e +55 21 98483-2044**, as well as via **e-mail [atalaiamangaratiba@praticagem-rj.org.br](mailto:atalaiamangaratiba@praticagem-rj.org.br)**.

These means of communication are available 24 hours a day and 07 (seven) days a week.

Each request for manpower (Pilot) will be preceded by a minimum period of three hours prior to the maneuver.

The Pilotage boat can be recognized at night owing to its white and red lights on the upper hull, and the red and white ones on the superstructure in daylight.

Ships should provide a ladder for pilot access in accordance with the Maritime Authority regulations and whenever necessary accommodation.

### Maneuvers:

The ships' maneuvers were simulated in a real-time study at USP – the Polytechnic School of the University of São Paulo – with the participation of the Pilotage service, resulting in the following recommendations:

- The entry and exit trips of laden ships should only occur during daylight hours;
- Maneuvers of ships in ballast should occur in day and night conditions;
- For entry trips, tugboats should be moored before the ship demands the access channel to Porto Sudeste;
- For exit trips, tugboats can only be released after the ship leaves the access channel to the Terminal;

Annex 03 presents the operational parameters applicable to maneuvers in Port Sudeste, including the permitted meteorological and oceanographic conditions, the number of pilots required for each type of operation, and the minimum number of tugboats according to the size of the ship and the loading condition. These criteria follow the NPCP-RJ and the operational feasibility studies of the terminal, ensuring that maneuvers occur within safe and standardized limits.

### 7.3. Tugs

The use of tugs is mandatory and they are available in Sepetiba Bay to assist all terminals within a radius of 12 kilometers, as required by shipping agencies. The number of tugboats is shown in the table below:

| SHIP SIZE  | NUMBER OF TUGS IN MANEUVERS |                |                |                |
|--|-----------------------------|----------------|----------------|----------------|
|  | VLCC                        | SUEZMAX        | AFRAMAX        | LONG-RANGE     |
|  | LOA - 340 m                 | LOA - 284 m    | LOA - 258 m    | LOA - 230 m    |
|  | BREADTH - 61 m              | BREADTH - 49 m | BREADTH - 44 m | BREADTH - 40 m |
|  | DWT - 320,000               | DWT - 160,000  | DWT - 120,000  | DWT - 75,000   |
| <b>LADEN ENTRY TRIP</b>  | N/A                         | 4+1            | 4              | 4              |
| <b>BALLAST ENTRY TRIP</b>  | 5                           | 3+1            | 3+1            | 3+1            |
| <b>LADEN EXIT TRIP</b>   | 5 (HALF-LOAD)               | 4+1            | 4              | 4              |
| <b>BALLAST EXIT TRIP</b>   | 5                           | 3+1            | 3+1            | 3-1            |
| Note: The minimum static pull of the tugboats is 55 t.   |                             |                |                |                |
| The maximum static pull of the tugboats is 80t.  |                             |                |                |                |
| For VLCC, at least five azimuthal thrusters are required, with two of 70t and three of 60t static thrusters. |                             |                |                |                |

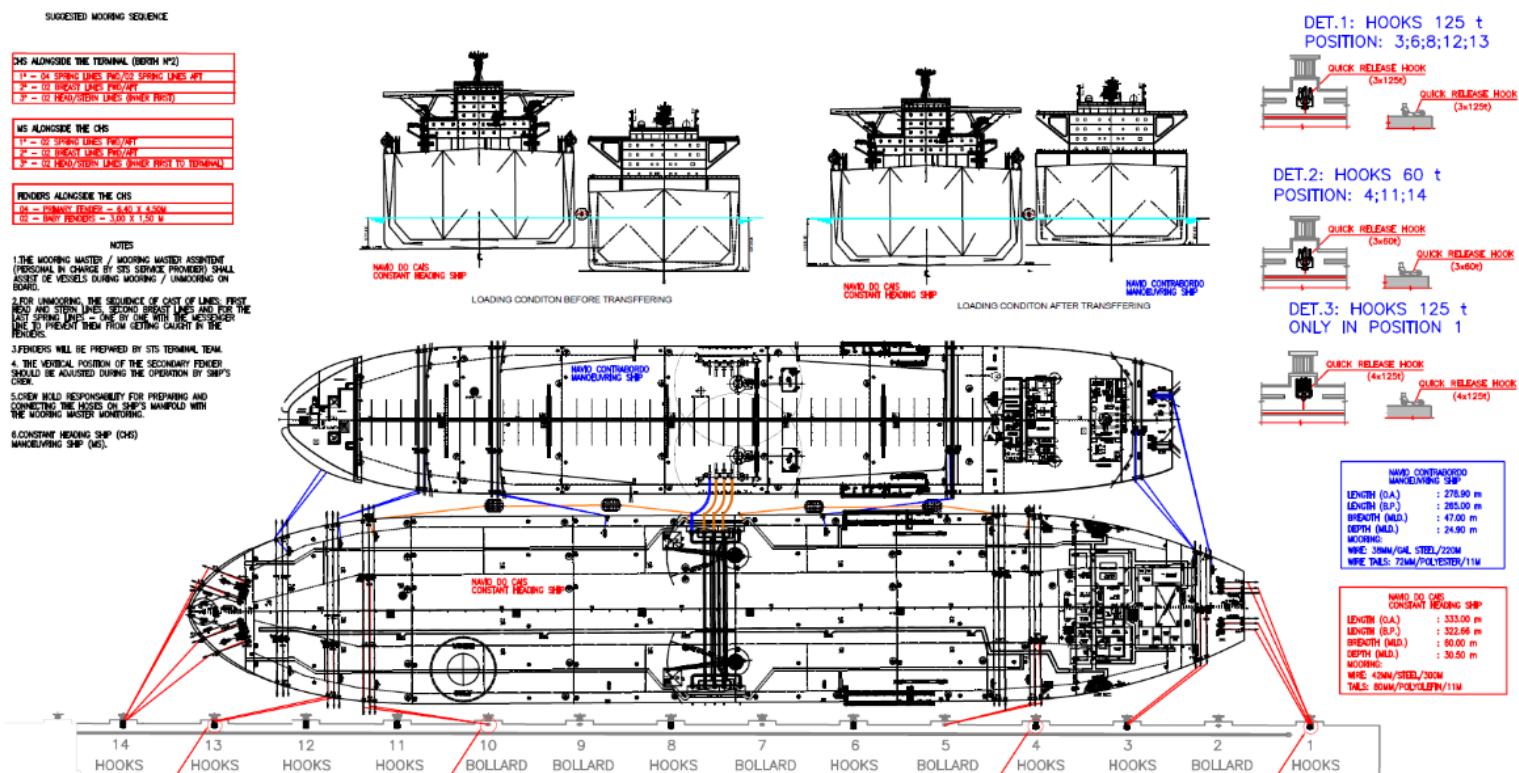
**Note:** During STS operation, the terminal will have a Firefighting **(FI-FI)** tugboat on standby. The tugboat maintains a constant listening watch on VHF channels 11 and 16.

### 7.4. Mooring/Berthing Plan

The Mooring Plan is prepared by the Mooring Master based on the recommendations of the OCIMF and the Ship-to-Ship Transfer Guide, and approved by all parties involved. It defines the arrangement, the sequence of mooring cables, and the coordination of teams during mooring, remaining, and unmooring. The berthing and unberthing maneuvers are performed by the pilot, the captain, and assisted by the Mooring Master with the support of tugboats.

Mooring plans may vary depending on the characteristics of the ships or the meteorological and oceanographic conditions.

- Constant Heading Ship (inner ship): 4 × 2 × 2 – 4 head/stern lines, 2 breast lines and 2 springs.
- Maneuvering ship (outer ship) : 4 × 2 – 4 head/stern lines and 2 springs or 2 x 2 x 2 – 2 head/stern lines, 2 breast lines x 2 springs.



### **Operational sequence:**

- Mooring: springs → breast lines → head/stern lines.
- Unmooring: head/stern lines → breast lines → springs.

This sequence favors surge/sway control and the progressive distribution of loads on the lines, reducing stress on fenders and mooring points.

### **Cable running – ship alongside:**

- The terminal has two service boats to aid in passing head/stern lines onshore, when necessary.
- The transfer of spring lines from the outer vessel to the inner vessel shall be conducted using messenger lines, avoiding contact between steel wires and the fenders.
- The operation is overseen by the Mooring Master. The wire rope with a tuggle pin should not be released during unmooring.

### **Safety notes and good practices:**

- Maintain continuous communication between the MM, pilots, mooring crew, and deck crew of both ships.
- Monitor the vertical angles of the lines and avoid crossing them over barriers.
- Confirm that capstans/winches, brakes, and mooring points are enabled;
- While the vessel is berthed, the crew is responsible for re-tensioning the mooring cables in accordance with tidal variations and cargo transfers operations, and for complying with the terminal's operational limits.

### **Mooring and Lines**

- All mooring lines must be in good condition and have a 1" diameter lead line of at least 30 m;
- Wire ropes must have tails in accordance with OCIMF guidelines;
- The installation of rat guards is mandatory;
- The mooring must follow the guidelines of the Pilotage service and the terminal;



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- “Soot removal”, rust removal, hull painting, or similar activities are prohibited while the ship is berthed.

#### 7.5. Berthing maneuver and approach speed

The mooring lines on board of the constant heading ship and on the maneuvering ship must be handled by the ship's crew. At the pier, they will be handled by the terminal's mooring team and communication will be carried out via VHF radio channel 13 or 14, following the Pilot's instructions.

Mooring maneuvers should be performed at a speed of approximately 0.2 knots. The ship's low segment prevents damage to the fender system and port facilities.

#### 7.6. Disposal of Waste

Porto Sudeste allows the removal of waste from vessels exclusively by authorized service providers, in accordance with ANTAQ Resolution No. 99/2023. The Terminal acts only as a controlling and facilitating authority, not carrying out the collection, transport or final disposal, which are entirely the responsibility of the collection company contracted by the Agency/Shipowner.

For more information, please check the official Porto Sudeste website: <https://www.portosudeste.com>.

Accreditation must be completed via official website: <https://www.portosudeste.com/esg/meio-ambiente/>

Note - Official Manual: All the detailed steps for qualification, pre-operation, operation and post-operation (including documentary requirements, APR, inspections, forms and deadlines) are described in the Vessel Waste Removal Qualification, Operation and Post-Operation Manual available on this page.

## **8. Operational Information**

### **8.1. Accessing the Ship**

The accommodation ladder should be provided by the constant heading ship, complemented by an extension ladder provided by the terminal. The safety requirements according to NR 29 should be met.

Embarking/disembarking in the maneuvering ship it must be done using a service boat and the accommodation ladder. The pilot ladder is not recommended to embarking/disembarking in this terminal.

In both cases, the personnel should carry a life jacket, in addition to the mandatory PPE, and the ship should have a lifebuoy with a lifeline for launching, accordingly.

### **8.2. Pre-operational conference policy**

#### **Operational Modality**

Porto Sudeste do Brasil is authorized to carry out Ship-to-Ship (STS) in the Double Banking modality, with one ship moored at the jetty (constant heading ship) and the second ship moored alongside (maneuvering ship).

The operations are exclusively for the transfer of oil and petroleum products, in accordance with the operational scope of the terminal.

#### **Class of Vessel**

Vessels classes for STS operations – Porto Sudeste:

- VLCC (in half-load / draft up to 16.0 m)
- Suezmax
- Aframax
- Panamax/Long Range (LR)

Ships outside these dimensions may be assessed as a special case, following a compatibility analysis conducted by the STS Management.

### Operational Configuration – Double Banking

- In STS operations, the constant heading ship at Berth 01 or Berth 02, according to the schedule.
- The maneuvering ship then approaches to mooring alongside the constant heading ship.
- During mooring alongside, the following must be ensured:
  - ✓ Offset minimum of 2 m between bridge wings.
  - ✓ Offset maximum of 5 m between manifolds to preventing kinks in transfer lines.
  - ✓ Positioning of primary and secondary fenders according to the approved mooring plan.

### Conditions for Commencement of Operation

The STS operation is only initiated after:

- Approval of the **pre-operational meeting**;
- **ISGOTT and STS Transfer Guide** safety checks completed;
- STS equipment verified and certified;
- Environmental conditions within acceptable limits for the size of the ships;

Pilots, tugboats and STS team duly mobilized.

### 8.3. STS Operational Steps

STS operations at Porto Sudeste are conducted under a sequential arrangement defined in the **Joint Plan of Operation (JPO)** and supported by **ISGOTT** practices and the **Ship-to-Ship Transfer Guide**. **Mooring Master (MM)** leads the coordination between Pilots, Masters, Inspectors and deck crews, ensuring unity of judgment and immediate response to any operational variation.

### Berthing and Mobilization

The berthing only begins after the operational window has been validated. The constant heading ship proceeds to the designated berth and its maneuver is monitored by Port Suedeste's Boarding Inspection department, executing the standard 4 × 2 × 2 arrangement with the initial transfer of the



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springs, followed by breast lines and, finally, head/stern lines. The mooring plan must be previously approved by the Masters ensuring that the operation proceeds according to the planned configuration.

Once the constant heading ship (CHS) has berthed at the jetty, the mobilization of STS equipment begins. The technical team at Porto Sudeste assists the crew in positioning the fenders and hoses, using support vessels and the barge CMT JOFFRE. For this stage, the Master must provide at least four dedicated crew members: 1 crane operator, 1 pump operator and 2 able seamen, ensuring adequate human resources for lifting, transferring and securing equipment.

Subsequently, the maneuvering ship (MS) is moored alongside the CHS, under the supervision of the Mooring Master (MM) and in continuous communication with the Pilot and the Masters. The mooring arrangement for the MS follows a 4 (head/stern lines) x 2 (springs) configuration, commencing with the springs. Where the springs are steel wire, they shall be transferred using messenger lines and under controlled handling, ensuring that the wire ropes do not come into contact with the fenders to prevent damage. Following the springs, head and stern lines are passed, completing the mooring arrangement in accordance with the approved Mooring Plan. Where head and stern lines are required to be made fast ashore, support craft shall assist in handling and running the lines.

The approach is conducted in a controlled and progressive manner, allowing the fenders to absorb the berthing energy effectively. During the manoeuvring of the MS, the Mooring Master (MM) shall verify that the offset between bridge wings is at least 2 m, and that the manifold offset is approximately 5 m, ensuring suitable conditions for the next phase of the operation.

### **Pre-Pumping Preparation**

With the vessels moored, operational preparations begin. The preventive safety boom is positioned to involve both ships in 360°. The measurements and collection of cargo samples are carried out by a third-party inspection firm. The inspected manifolds, cargo hoses and vapor recovery systems are connected by the crew. The applicable checklists are completed, recording mutual understanding regarding sequences, limits, and contingencies. Only after the Safety Letter is signed and the MM gives final approval is the operation authorized to proceed.

### **Start of Transfer**

The transfer starts at a **slow rate**, allowing for visual and instrumental leak inspection. Once the system's integrity is confirmed, the flow rate is gradually increased to the agreed operating regime, with a maximum limit of **11,820 m<sup>3</sup>/h**. Communication between the teams remains continuous, ensuring that any change in conditions, whether in pressure readings or the behavior of the mooring system, is immediately addressed according to the JPO.

### **Monitoring During Transfer**

The operation remains under constant surveillance. Transferred volumes are monitored hourly, and any deviation exceeding the established tolerance limit results in the immediate interruption of pumping for investigation. In parallel, dynamic items on the checklists are revisited, preserving the integrity of the system and environmental protection. The Mooring Master (MM) monitors the relative variation in the vessels' draughts, fender compression, and mooring line tension, anticipating and implementing adjustments as necessary

### **End of Transfer**

Once pumping is complete, final measurements and sampling are carried out, consolidating the load balance between ships. The transfer hose is then depressurized in a controlled manner, and the remaining product is directed to the receiving ship (CHS).

The hoses are disconnected from the manifold by the crew and lifted by the crane of the ship with the largest freeboard, remaining suspended for approximately 20 minutes to allow the gravitational flow of the product to the tanks of the receiving ship, minimizing residue in the pipeline.

Drainage and disconnection are conducted under the direct supervision of the Mooring Master (MM), ensuring that there is no product residue inside the hoses and that all connections are returned to a safe state. Only after confirmation of the system's watertightness and integrity is preparation authorized for the unmooring MS phase and subsequent demobilization.

## Unberthing and Demobilization

Before the ship starts engines, the safety boom is completely removed. With the crews of both ships properly positioned, the unberthing is conducted under the coordination of the Pilotage, Masters, and the Mooring Master (MM), following the established operational sequence: it begins with head/stern lines, continues along the breast lines and finishes with the springs.

When the springs are steel wire, they shall be transferred using messenger lines and under controlled handling, ensuring that the wire ropes do not come into contact with the fenders to prevent damage. This task is performed in a synchronized manner, maintaining continuous communication between the MM (Marine Master), the Pilot, and both crews.

With the mooring lines completely released, the maneuvering ship (MS) gradually moves away to a safe area. From this point on, the demobilization process begins, conducted by the STS team in conjunction with the crew of the constant heading ship (CHS) berthed at the pier. Hoses and fenders are removed from the ship and transferred to the barge CMT JOFFRE.

The CHS remains moored at the jetty until the demobilization is fully completed and only receives authorization to unberthing after confirmation of a favorable operational window by the Pilotage service.

### 8.4. Ballast/Desballast

Ships involved in the operation of STS should have separate ballast systems.

The Maritime Authority standard for management of ballast water on ships – NORMAM-401, provides for the control of ballast water operation, in keeping with the International Convention for the Control and Management of Ballast Water and Sediments on Ships.

Special attention should be given by STS crew for the involuntary discharge of water contaminated with cargo product. The preventive fencing with a oil spill boom should consider the fencing together with the ballast discharge to prevent the leakage of oil-contaminated water.

#### Terminal Rules:

- Ballast exchange must be carried out in accordance with current laws before approaching the coast.
- It is strictly forbidden to flush contaminated water.
- The terminal may require the Ballast Water Record Book and evidence of the exchange.

#### Deballast Operation:

- The use of ballast on the pier is prohibited due to the risk to electrical equipment.
- The deballast plan must be agreed upon in advance with the Terminal.
- If the ballast rate is lower than the loading rate, the Mooring Master must be informed immediately.
- Delays resulting from low ballast pumping capacity are the sole responsibility of the ship.

#### 8.5. Crude Oil Washing (COW)

The terminal must be informed in advance of the ship's intention to carry out crude oil tank washing (COW) operations.

Specific checklists must be completed before, during, and after the operation.

The procedure can only begin after the systems and equipment have been verified and approved by the Mooring Master.

#### 8.6. Operational environmental limits

Environmental conditions in Sepetiba Bay are continuously monitored by the Local Port Service (LPS). The operational limits below follow the recommendations of **OCIMF**, **ISGOTT**, and the **Porto Sudeste Berthing and Mooring Study**, ensuring that STS (Double Banking) operations are conducted within safe standards.

Wind limits are defined based on structural and hydrodynamic simulations of STS operations in the OPTIMOOR software, PLUS version. The recommended action depends on the direction and intensity of the wind:

| PARAMETER | DIRECTION                  | SPEED (knots) | ACTION  |
|-----------|----------------------------|---------------|---|
| WIND      | N; S; SW; W; NW            | 30 to 35      | Stop operation  |
|           | NE; E; SE                  | 25 to 28      | Stop operation  |
|           | N; S; SW; W; NW            | > 35          | Disconnect hoses<br>Assess mooring system<br>Trigger tugs |
|           | NE; E; SE                  | > 28          | Disconnect hoses<br>Assess mooring system<br>Trigger tugs |
|           | N; NE; E; SE; S; SW; W; NW | > 40          | Trigger Emergency Response Plan                           |

- Typical tide variation: 0.00 m to 1.80 m
- Currents: not very significant for STS operation due to the protection of the bay;
- Swell: negligible in the terminal area;

Even with reduced impact, tidal variations can alter freeboard, mooring angles, and distance between hulls.

➤ **Minimum**

- The berthing/unberthing operation should not be performed with restricted visibility.
- Fog is common in winter, between 3:00 AM and 7:00 AM, and may require temporary suspension of operations.
- The decision is made jointly by the Master, the Pilotage, and the Mooring Master.

➤ **Electric Activity (Lightning)**

STS operations must be immediately suspended when:

- There are reports of lightning strikes near the terminal;
- Storm cells were identified by the LPS;
- The Master considers that there is an associated risk.

**8.7. Tank cleaning**

Tank cleaning is not permitted at Porto Sudeste.

**8.8. Policy on the use of the inert gas system**

It is mandatory to keep the inert gas system operational, pressurized, and functional throughout the entire operation.

The oxygen concentration in the cargo tanks must remain below 8%.

Any malfunction in the IG system must be reported immediately to the terminal and the Mooring Master.

**8.9. Tank inspection/product sampling and measurements**

Inspections, sampling, and measurements must be carried out by accredited inspectors.

Access to tanks and classified areas must comply with the safety requirements established by ISGOTT and the Maritime Authority.

**8.10. Pollution prevention**

The entire operation will be isolated beforehand with containment barriers.

It is forbidden to release any polluting product into the water.



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**List of annexes:**

**Annex 1: Definitions and concepts;**

**Annex 2: Reference documents;**

**Annex 3: Pilotage Rules;**

## 9. Annex 1: Definitions and Concepts

**APR:** Risk Preliminary Analysis.

**Barge:** A vessel equipped to assist operations alongside ships, it transports hoses, emergency response equipment, and performs other support activities, used as tankage with a storage capacity of 191 m<sup>3</sup>.

**CAE (Emergency Response Center)** Operational base equipped with personnel, vessels, and equipment for immediate response to emergencies during port and STS operations.

**International Safety Management Code (ISM Code):** A international standard for the safe management and operation of ships and for pollution prevention. The Code sets out safety management goals and requires that a Safety Management System be established by the company and be audited and approved by the authority of the flag of jurisdiction on the ship.

**COSE (Corporate Safety Operations Center):** The department responsible for coordinating security actions, emergency response, communication with authorities, and activation of the Terminal's contingency plans.

**COW:** Crude Oil Washing

**Primary fenders:** Safety elements, usually large cylindrical pneumatic fenders, responsible for absorbing the impact between the hulls of the ships during approach and departure, with sufficient diameter to keep them apart during the cargo transfer operation. They are typically installed on the waterline, spaced so as to protect the entire length of the hull of the smallest ship.

**Secondary fenders (Babys):** Safety elements, usually smaller cylindrical pneumatic fenders, responsible for absorbing the impact between the hulls of the ships during approach and departure. They are typically installed at the ends of the ship's parallel mid-body section.

**DWT:** Deadweight Tonnage

**Supply Vessel:** Vessel designed to assist operations alongside ships, used for transporting and positioning fenders, supporting cable laying, embarking and disembarking personnel, mobilizing STS equipment, and supporting operational and emergency situations.

**FI-FI (Fire Fighting):** Classification assigned to tugboats equipped with fire suppression systems, capable of supporting emergency operations involving ships and port facilities.

**H2S:** Hydrogen Sulphide.

**International Safety Guide for Oil Tankers and Terminals (ISGOTT):** International Safety Guide for Oil Tankers and Terminals.

**ISGOTT:** International Safety Guide for Oil Tankers and Terminals.



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**Joint Plan of Operation (JPO):** A document agreed upon between the ships involved, the Mooring Master, and the Terminal, establishing the operational sequence, responsibilities, limits, communications, and safety procedures for the execution of the STS operation.

**LOA:** Length Overall.

**Hose Line:** It is a flexible pipeline consisting of several hoses connected to each other, which serves to enable the passage of products between ships.

**Local Port Service (LPS):** The operational structure of Porto Sudeste is responsible for coordinating port communications, monitoring meteorological and oceanographic conditions, supporting maneuvers, and acting as an operational interface between ships, pilots, and the terminal.

**MARPOL:** Short for “Marine Pollution”, it is an International Convention for the Prevention of Pollution from Ships, created in 1973.

**Mooring Master (MM):** Qualified Deck Officer, experienced in ship trips and operation of oil tankers. He/she will be the representative of Porto Sudeste in Ship-to-Ship operations.

**Maneuvering Ship (MS):** It is the ship that will pump the product to the receiving ship, usually mooring alongside.

**Constant Heading Ship (CHS):** It is the ship that will receive the cargo from the maneuvering ship, and it usually berths at the pier.

**NORMAM:** Regulations of the Brazilian Maritime Authority.

**NPCP:** Standards and Procedures of the Port Captancy. Document issued by the Brazilian Maritime Authority that regulates navigation, maneuvers, anchoring, berthing, safety of human life, environmental protection, and port operations within the area under its jurisdiction.

**NR - Regulatory Standard:** A set of regulations issued by the Ministry of Labor and Employment (MTE) that establishes requirements and measures for occupational safety and health, aimed at preventing accidents and occupational diseases in work activities, including port and industrial operations.

**Oil Companies International Marine Forum (OCIMF):** organization where best operational practices between ships and terminals are discussed.

**Ship-to-Ship (STS) Operation:** It is the operation of transferring petroleum and its byproducts, liquefied gases and chemicals, as cargo, between two ships located in AJB, excluding fixed platforms, floating platforms, FPSO and FSU. The main characteristic of this type of operation is the mooring of two ships, one alongside the other, which can occur in open sea (anchored or moving together) or in port areas (berthed or anchored). The STS operation does not include the transfer of oil for the vessels' consumption.

**OPTIMOOR:** Hydrodynamic and structural simulation software used for assessing mooring forces, environmental response, and defining operational limits in STS maneuvers and operations.

**Emergency Response Plan (PAE):** Formal and standardized document that establishes the responsibilities and efforts to be followed to control an emergency and mitigate its effects, including organizations, operational response procedures, and resources.

**Individual Emergency Plan (PEI):** Emergency plan designed to fight leakage of oil and byproducts in water bodies.

**Emergency Plan against fire and panic (PECIP):** A specific plan for Port Sudeste aimed at preventing, controlling, and responding to fire, explosion, evacuation, and panic situations, integrating human resources, equipment, and operational procedures.

**RIPEAM:** The International Regulations for Preventing Collisions at Sea (COLREG) establish the rules of navigation, right-of-way, light signals, marks, sound signals, and procedures to be followed by ships in order to prevent collisions and ensure the safety of navigation.

**Safety Letter:** A document signed between the ships involved and the Terminal, confirming that all safety checks have been completed and that the STS operation is authorized to begin.

**Mooring System:** Set of lines, fittings, and hardware that make it possible to moor the ship at the pier or alongside another ship.

**Ship-to-Ship Transfer Guide:** international guide that recommends the best practices for carrying out STS operations.

**Transshipment:** Operation of transferring products between ships, which may be anchored, moored in opposite or adjacent berths, or in navigation.

**Vapor recovery:** System used to prevent the discharge of hydrocarbon vapors into the atmosphere, typically interconnecting ships with appropriate hoses. During cargo transfer, vapors leaving the receiving ship return to the discharging ship.

**Vetting:** Analysis based on legal, statutory and mandatory requirements, responsible for certifying whether the ship is fit to operate under satisfactory conditions of safety, environmental preservation and the integrity of its facilities.

## 10. Annex 2: Reference Documents

- Analysis and validation for the acceptance of tank ships;
- Study of berthing and mooring of ships, both solo and alongside, at the Sudeste Port – Itaguaí – RJ;
- Numerical study of structural check of the pier at Porto Sudeste in berthing and mooring scenarios for ships alongside;
- ISGOTT - International Safety Guide for Oil Tankers and Terminals - ICS/OCIMF;
- MEG – Mooring Equipment Guidelines;
- Marine Terminal Information Booklet – OCIMF;
- NORMAM 311 – Maritime Authority regulations for pilotage services;
- NOMAM 401 – Maritime Authority Standards for environmental protection caused by vessels and similar equipment;
- NR 29 – Regulatory standard for Occupational Safety and Health in port work;
- RIPEAM - International Regulations for Preventing Collisions at Sea;
- Ship to Ship Transfer Guide (Petroleum) - ICS/OCIMF.

## 11. Annex 3: Pilotage Rules

| PARÂMETROS OPERACIONAIS PARA OPERAÇÕES STS - PORTO SUDESTE DO BRASIL<br>(Operational Requirements for STS operations) |  |  |   |   |   |   |
|---|--|--|---|---|---|---|
| Legislação aplicável: NPCP - RJ - 3º REVISÃO - 2025<br>(Applicable regulation - NPCP - RJ - 3rd Revision - 2025)      |  |  |   |   |   |   |
| NAVIO TIPO<br>(Vessel type)   | LOCAL DA MANOBRA / CONDIÇÃO DE CARREGAMENTO<br>(Manoeuvring Location / Cargo Condition)  | CONDICIONANTES METEOCEANOGRÁFICAS<br>(Meteorological and Oceanographic Conditions - Liquid Bulk) |   |   | Nº PRÁTICOS /<br>PERÍODO DA MANOBRA<br>(Nº of Pilots / Manoeuvre<br>Period) | REBOCADORES<br>(Tugs)   |
|   |  | VENTO<br>(Wind)  | CORRENTE DE MARÉ<br>(Tidal Current)   | VISIBILIDADE<br>(Visibility)  |   |   |
| SUEZMAX   | Ao cais (em lastro) / (Alongside berth - in ballast)<br><b>Atracação (Berthing) / Desatracação (Unberthing)</b>                              | 15 Nós (Knots)   | 0.8 Nó (Knot) - vazante (ebb)<br>0.5 Nó (knot) - enchente (flood)   | 3 MN (NM)   | 1 - Diurna (Daytime)<br>1 - Noturna (Nighttime)                             | 3 Az = (2 x 60 TTE + 1 X 70 TTE)<br>(+1 X 60 TTE a critério do CMTE)<br>(3 ASD tugs (2 x 60 TBP + 1 x 70 TBP)<br>(+1 x 60 TBP at Master's discretion) |
|   | Ao cais (Carregado / meia carga)<br>(Alongside berth - Loaded / partially loaded)<br><b>Atracação (Berthing) / Desatracação (Unberthing)</b> | 15 Nós (Knots)   | 0.4 Nó (knot) - vazante (ebb) / enchente (flood)  | 3 MN (NM)   | 1 - Diurna (Daytime)  | 4 Az = (2 x 60 TTE + 2 X 70 TTE)<br>(+1 X 60 TTE a critério do CMTE)<br>(4 ASD tugs (2 x 60 TBP + 2 x 70 TBP)<br>(+1 x 60 TBP at Master's discretion) |
|   | A contrabordo (em lastro / carregado / meia carga)<br>(Outer vessel - In ballast, Loaded, partially loaded)<br><b>Atracação (Berthing)</b>   | 15 Nós (Knots)   | Em lastro (In Ballast) - 0.8 Nó (knot) - vazante (ebb) / 0.5<br>Nó (knot) - enchente (flood)<br>Carregado (Loaded) ou meia carga (Partially Loaded) -<br>0.4 Nó (knot) - vazante (ebb) / enchente (flood) | 3 MN (NM)   | 1 - Diurna (Daytime)  | 5 Az = (3 x 60 TTE + 2 X 70 TTE)<br>(5 ASD tugs (3 x 60 TBP + 2 x 70 TBP)   |
|   | A contrabordo (em lastro)<br>(Outer vessel - In ballast)<br><b>Desatracação (Unberthing)</b>   | 15 Nós (Knots)   | 0.8 Nó (Knot) - vazante (ebb)<br>0.5 Nó (knot) - enchente (flood)   | 3 MN (NM)   | 1 - Diurna (Daytime)<br>2 - Noturna (Nighttime)                             | 4 Az = (2 x 60 TTE + 2 X 70 TTE)<br>(4 ASD tugs (2 x 60 TBP + 2 x 70 TBP)   |
|   | A contrabordo (Carregado / meia carga)<br>(Outer vessel - Loaded, partially loaded)<br><b>Desatracação (Unberthing)</b>                      | 15 Nós (Knots)   | 0.4 Nó (knot) - vazante (ebb) / enchente (flood)  | 3 MN (NM)   | 1 - Diurna (Daytime)  | 4 Az = (2 x 60 TTE + 2 X 70 TTE)<br>(4 ASD tugs (2 x 60 TBP + 2 x 70 TBP)   |
| AFRAMAX   | Ao cais (em lastro) / (Alongside berth - in ballast)<br><b>Atracação (Berthing) / Desatracação (Unberthing)</b>                              | 20 Nós (Knots) -<br>Diurna (Daytime)<br>15 Nós (Knots) -<br>Noturna (Nighttime)                  | 1.0 Nó (Knot) - vazante (ebb) / 0.8 Nó (knot) - enchente<br>(flood) - Diurna (Daytime)<br>0.8 Nó (knot) - vazante (ebb) / 0.5 Nó (knot) - enchente<br>(flood) - Noturna (Nighttime)                       | 3 MN (NM) - Diurna<br>(Daytime)<br>5 MN (NM) - Noturna<br>(Nighttime) | 1 - Diurna (Daytime)<br>1 - Noturna (Nighttime)                             | 3 Az = (3 x 60 TTE)<br>(+1 X 60 TTE a critério do CMTE)<br>(3 ASD tugs (3 x 60 TBP)<br>(+1 x 60 TBP at Master's discretion)                           |
|   | Ao cais (Carregado / meia carga)<br>(Alongside berth - Loaded / partially loaded)<br><b>Atracação (Berthing) / Desatracação (Unberthing)</b> | 20 Nós (Knots)   | 1.0 Nó (knot) - vazante (ebb) / 0.8 Nó (knot) - enchente<br>(flood)   | 3 MN (NM)   | 1 - Diurna (Daytime)  | 4 Az = (4 x 60 TTE)<br>(4 ASD tugs (4 x 60 TBP)   |
|   | A contrabordo (em lastro / carregado / meia carga)<br>(Outer vessel - In ballast, Loaded, partially loaded)<br><b>Atracação (Berthing)</b>   | 20 Nós (Knots)   | 1.0 Nó (knot) - vazante (ebb) / 0.8 Nó (knot) - enchente<br>(flood)   | 3 MN (NM)   | 1 - Diurna (Daytime)  | 4 Az = (4 x 60 TTE)<br>(4 ASD tugs (4 x 60 TBP)   |
|   | A contrabordo (em lastro)<br>(Outer vessel - In ballast)<br><b>Desatracação (Unberthing)</b>   | 20 Nós (Knots) -<br>Diurna (Daytime)<br>15 Nós (Knots) -<br>Noturna (Nighttime)                  | 1.0 Nó (Knot) - vazante (ebb) / 0.8 Nó (knot) - enchente<br>(flood) - Diurna (Daytime)<br>0.8 Nó (knot) - vazante (ebb) / 0.5 Nó (knot) - enchente<br>(flood) - Noturna (Nighttime)                       | 3 MN (NM) - Diurna<br>(Daytime)<br>5 MN (NM) - Noturna<br>(Nighttime) | 1 - Diurna (Daytime)<br>2 - Noturna (Nighttime)                             | 4 Az = (4 x 60 TTE)<br>(4 ASD tugs (4 x 60 TBP)   |
|   | A contrabordo (Carregado / meia carga)<br>(Outer vessel - Loaded, partially loaded)<br><b>Desatracação (Unberthing)</b>                      | 20 Nós (Knots)   | 1.0 Nó (knot) - vazante (ebb) / 0.8 Nó (knot) - enchente<br>(flood)   | 3 MN (NM)   | 1 - Diurna (Daytime)  | 4 Az = (4 x 60 TTE)<br>(4 ASD tugs (4 x 60 TBP)   |

|            |   |   |   |   |   |   |
|------------|---|---|---|---|---|---|
| LONG RANGE | Ao cais (em lastro) / (Alongside berth - in ballast)<br><b>Atracação (Berthing) / Desatracação (Unberthing)</b>                           | 20 Nós (Knots) - Diurna (Daytime)<br>15 Nós (Knots) - Noturna (Nighttime) | 1.0 Nó (Knot) - vazante (ebb) / 0.8 Nó (knot) - enchente (flood) - Diurna (Daytime)<br>0.8 Nó (knot) - vazante (ebb) / 0.5 Nó (knot) - enchente (flood) - Noturna (Nighttime) | 3 MN (NM) - Diurna (Daytime)<br>5 MN (NM) - Noturna (Nighttime) | 1 - Diurna (Daytime)<br>1 - Noturna (Nighttime) | 3 Az = (3 x 55 TTE) - Atracação<br>2 Az = (2 x 55 TTE) - Desatracação (Berthing: 3 ASD tugs (3 x 55 T BP) (Unberthing: 2 ASD tugs (2 x 55 T BP) |
|            | Ao cais (Carregado / meia carga) (Alongside berth - Loaded / partially loaded)<br><b>Atracação (Berthing) / Desatracação (Unberthing)</b> | 20 Nós (Knots)  | 1.0 Nó (knot) - vazante (ebb) / 0.8 Nó (knot) - enchente (flood)  | 3 MN (NM)   | 1 - Diurna (Daytime)                            | 4 Az = (4 x 55 TTE) - Atracação<br>3 Az = (3 x 55 TTE) - Desatracação (Berthing: 4 ASD tugs (4 x 55 T BP) (Unberthing: 3 ASD tugs (3 x 55 T BP) |
|            | A contrabordo (em lastro / carregado / meia carga) (Outer vessel - In ballast, Loaded, partially loaded)<br><b>Atracação (Berthing)</b>   | 20 Nós (Knots)  | 1.0 Nó (knot) - vazante (ebb) / 0.8 Nó (knot) - enchente (flood)  | 3 MN (NM)   | 1 - Diurna (Daytime)                            | 4 Az = (4 x 55 TTE)<br>(4 ASD tugs (4 x 55 T BP)  |
|            | A contrabordo (em lastro) (Outer vessel - In ballast)<br><b>Desatracação (Unberthing)</b>   | 20 Nós (Knots) - Diurna (Daytime)<br>15 Nós (Knots) - Noturna (Nighttime) | 1.0 Nó (Knot) - vazante (ebb) / 0.8 Nó (knot) - enchente (flood) - Diurna (Daytime)<br>0.8 Nó (knot) - vazante (ebb) / 0.5 Nó (knot) - enchente (flood) - Noturna (Nighttime) | 3 MN (NM) - Diurna (Daytime)<br>5 MN (NM) - Noturna (Nighttime) | 1 - Diurna (Daytime)<br>2 - Noturna (Nighttime) | 4 Az = (4 x 55 TTE)<br>(4 ASD tugs (4 x 55 T BP)  |
|            | A contrabordo (Carregado / meia carga) (Outer vessel - Loaded, partially loaded)<br><b>Desatracação (Unberthing)</b>                      | 20 Nós (Knots)  | 1.0 Nó (knot) - vazante (ebb) / 0.8 Nó (knot) - enchente (flood)  | 3 MN (NM)   | 1 - Diurna (Daytime)                            | 4 Az = (4 x 55 TTE)<br>(4 ASD tugs (4 x 55 T BP)  |

**CONDIÇÕES PARA MANOBRAS DIURNAS**  
(Daytime Manoeuvr conditions)

**POB ATRACAÇÃO (Pilot on board - berthing) Navios com calado <= 13 metros) (Vessels with draft <= 13 meters)**  
Navios provenientes de fora de barra: a partir de 1 hora antes do nascer do sol, na meia hora ou hora cheia posterior até 2 horas antes do pôr do sol, na meia hora ou hora cheia anterior;  
(Vessels arriving from outer anchorage: From 1 hour before sunrise, at the next half-hour or full hour, until 2 hours before sunset, at the previous half-hour or full hour)  
Navios provenientes do fundeadouro de Jurubaíba: a partir do nascer do sol, na meia hora ou hora cheia posterior, até 1 hora antes do pôr do sol, na meia hora ou hora cheia anterior;  
(Vessels arriving from Jurubaíba anchorage: From sunrise, at the next half-hour or full hour, until 1 hour before sunset, at the previous half-hour or full hour)

**POB ATRACAÇÃO (Pilot on board - berthing) Navios com calado > 13 metros) (Vessels with draft > 13 meters)**  
Navios provenientes de fora de barra: a partir de 1 hora antes do nascer do sol, na meia hora ou hora cheia posterior, até 3 horas antes do pôr do sol, na meia hora ou hora cheia anterior;  
(Vessels arriving from outer anchorage: From 1 hour before sunrise, at the next half-hour or full hour, until 3 hours before sunset, at the previous half-hour or full hour)  
Navios provenientes do fundeadouro de Jurubaíba: a partir do nascer do sol, na meia hora ou hora cheia posterior, até 2 horas antes do pôr do sol, na meia hora ou hora cheia anterior;  
(Vessels arriving from Jurubaíba anchorage: From sunrise, at the next half-hour or full hour, until 2 hour before sunset, at the previous half-hour or full hour)

**POB DESATRACAÇÃO (Pilot on board - Unberthing):**  
Após o nascer do sol, na meia hora ou hora cheia posterior, até 1 hora antes do pôr do sol, na meia hora ou hora cheia anterior.  
(From sunrise, at the next half-hour or full hour, until 1 hour before sunset, at the previous half-hour or full hour)

Legislação aplicável: Portaria 153/CPRJ de 29 de Novembro de 2024  
(Applicable regulation: Brazilian Navy Ordinance n° 153/2024)

| NAVIO TIPO<br>(Vessel type) | LOCAL DA MANOBRA / CONDIÇÃO DE CARREGAMENTO<br>(Manoeuvring Location / Cargo Condition)  | CONDICIONANTES METEOCEANOGRÁFICAS<br>(Meteorological and Oceanographic Conditions) |  |                              | N° PRÁTICOS / PERÍODO DA MANOBRA<br>(N° of Pilots / Manoeuvr Period) | REBOCADORES<br>(Tugs)   |
|-----------------------------|--|--|--|------------------------------|--|---|
|                             |  | VENTO<br>(Wind)  | CORRENTE DE MARÉ<br>(Tidal Current)              | VISIBILIDADE<br>(Visibility) |  |   |
| VLCC                        | Ao cais (em lastro) - calado até 11,0 metros<br>(Alongside berth - in ballast - draft up to 11.0 m)<br><b>Atracação (Berthing)</b>               | 12 Nós (Knots)   | 0.4 Nó (knot) - vazante (ebb) / enchente (flood) | 3 MN (NM)                    | 2 - Diurna (Daytime)   | 5 Az = (3 x 60 TTE + 2 X 70 TTE)<br>(5 ASD tugs (3 x 60 T BP + 2 x 70 T BP) |
|                             | Ao cais (meia carga) - calado até 16,0 metros<br>(Alongside berth - partially loaded - draft up to 16.0 m)<br><b>Desatracação - (Unberthing)</b> |  |  |                              |  |   |

**CONDIÇÕES PARA MANOBRAS - SOMENTE DIURNAS**  
(Manoeuvr conditions - Daytime operations only)

**POB ATRACAÇÃO (Pilot on board - berthing):**  
Navios provenientes de fora de barra: 2,5 horas antes da preamar, na meia hora ou hora cheia anterior e a partir de 0,5 horas antes do nascer até 2,5 horas antes do pôr do sol, na meia hora ou hora cheia anterior;  
(Vessels arriving from outer anchorage: 2.5 hours before high water, at the preceding half-hour or full hour, and from 0.5 hours before sunrise until 2.5 hours before sunset, at the preceding half-hour or full hour);  
Navios provenientes da área de fundeio na Guaíba: 2,0 horas antes da preamar, na meia hora ou hora cheia anterior e a partir de 0,5 horas antes do nascer até 2,0 horas antes do pôr do sol, na meia hora ou hora cheia anterior;  
(Vessels arriving from the Guaíba anchorage area: 2.0 hours before high water, at the preceding half-hour or full hour, and from 0.5 hours before sunrise until 2.0 hours before sunset, at the preceding half-hour or full hour);  
Navios provenientes do fundeadouro de Jurubaíba: 1,5 horas antes da preamar, na meia hora ou hora cheia anterior e a partir de 1,5 horas antes do pôr do sol, na meia hora ou hora cheia anterior.  
(Vessels arriving from Jurubaíba anchorage: 1.5 hours before high water, at the preceding half-hour or full hour, and from 1.5 hours before sunset, at the preceding half-hour or full hour).

**POB DESATRACAÇÃO (Pilot on board - Unberthing)**  
POB na preamar, na meia hora ou hora cheia anterior e a partir do nascer até 2 horas antes do pôr do sol, na meia hora ou hora cheia anterior.  
(POB at high water, at the preceding half-hour or full hour, and from sunrise until 2 hours before sunset, at the preceding half-hour or full hour).