

Sveučilište u Rijeci
Pomorski fakultet u Rijeci

Seminarski rad iz kolegija

PLANIRANJE PUTOVANJA

Prezime i ime studenta:

Prezime i ime mentora: **Dr.sc. Đani Mohović**

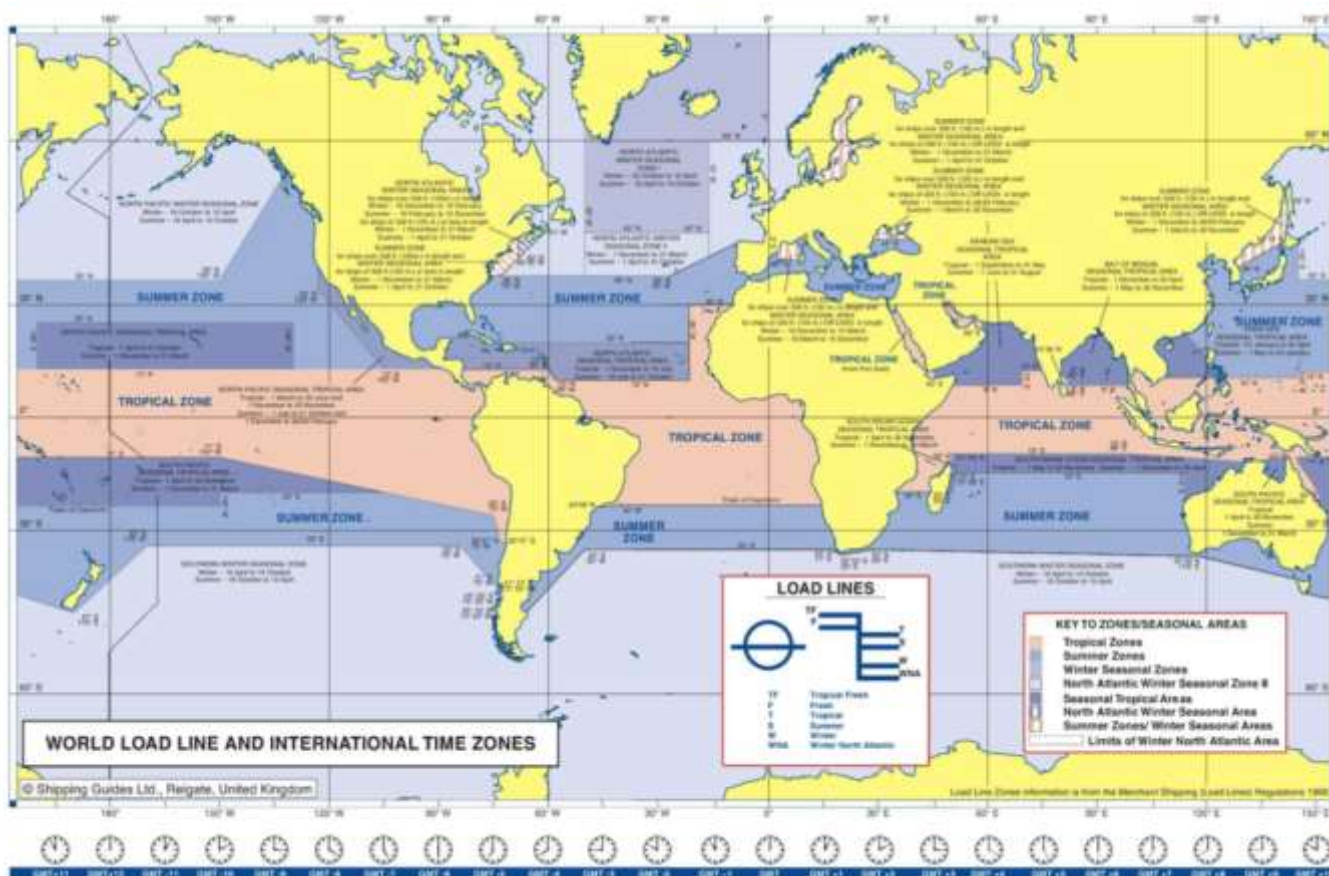
Rijeka,.

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OSNOVNI PODACI O BRODU I PUTOVANJU

Vrsta i veličina broda:	Brod za prijevoz generalnog tereta, nosivost 24000 t
Teret na brodu:	Generalni teret, 22500 t
Luka polaska:	Napoli, Italy
Luka dolaska:	Santos, Brazil
Među-luke:	-
Gaz broda:	11,8 m
Brzina broda:	16 čv
Dnevni potrošak goriva:	27 t/dan
Brod kreće na putovanje:	05/05/2018
Karta zona (loadline):	Iz Summer u Tropical zonu



PRORAČUN TRAJANJA PUTOVANJA

Port	Distance	Days	Date/time(LT)
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Napoli

ETD: 05.05.2018/ 08:00

Santos

5378M

14d

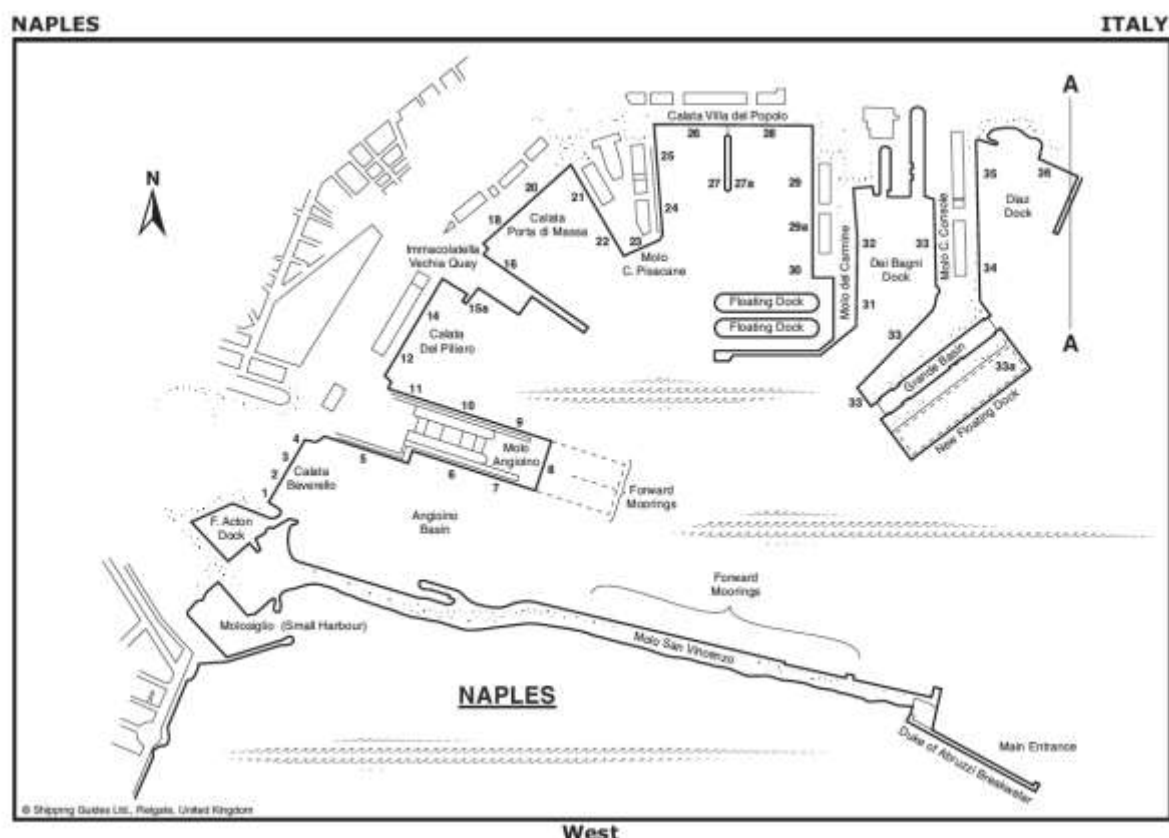
ETA: 19.05.2018/ 08:00

Ukupna potrošnja goriva: 378 t

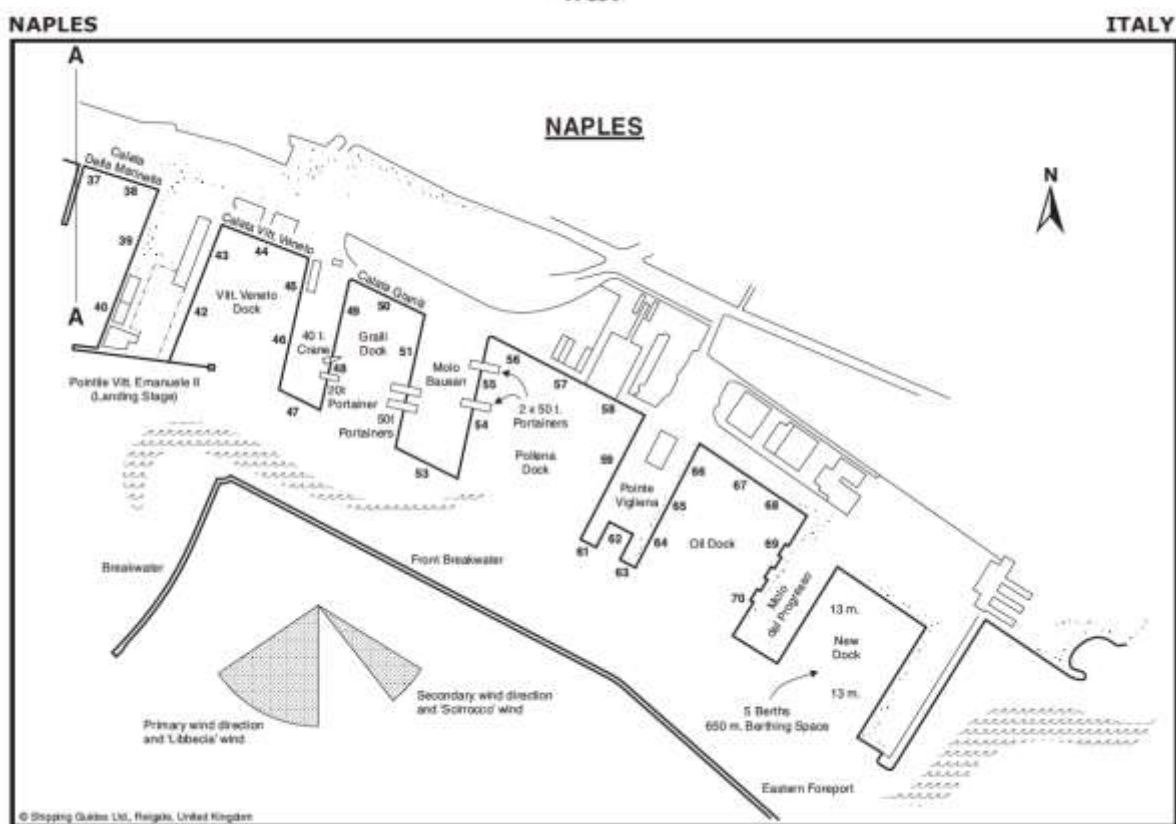
Ukupno goriva potrebno za putovanje uključujući i rezervu: 459 t

Ruta putovanja:



PORT OF DEPARTURE: NAPLES (40° 51'N 014° 16'E)

West



General - East

LOCATION: The port is located in the Gulf of Naples on the SW coast of Italy.

Charts: BA Charts No. 908, 914 and 915.

DOCUMENTS:

- 2 Crew Lists
- 2 Passenger Lists
- Provisions Manifest
- Manifest of Crew Personal Effects
- Cargo Manifest
- Arrival Report – completed on arrival
- Maritime Declaration of Health Certificate – completed on arrival
- Ship's Certificates, including Italian Authority Dues
- Vaccination Certificates for sighting.

RESTRICTIONS: Two port entrances of which the western is 280 m.wide, the eastern is 250 m. wide. Use of propellers and thruster within 20 m. of piers not allowed.

APPROACHES: Port Approaches: Approaches to the Gulf of Naples are free of navigational dangers. Ships approaching Naples from the north are cautioned to avoid the Procida Canal, between Procida Island and Capo Miseno (1.5 miles wide) in view of the heavy traffic usually met in this area and other navigation hazards. Passing well clear west of Ischia Island is recommended. Caution is necessary because numerous fishing boats are likely to be encountered in the area, especially at night and in the early morning. The entrances to the port are 250 m. and 300 m. wide. The eastern entrance is reserved to product and chemical tankers and western entrance for all other vessels.

TURNING BASINS: Vessels up to LOA 300 m. can be turned within the port.

PORT OPERATIONS: The port is located on the northern shore of a natural gulf and is well sheltered from northerly winds, but winds from the SW to SE may affect port operations at the petroleum berths, by creating a considerable swell inside the breakwater.

ENTRY/BERTHING: For the berthing manoeuvres, and particularly when ships swing inside the petroleum basin, it is very important that ship's engine orders are carried out accurately and promptly. The chief engineer should be advised in advance of importance of this.

PILOTAGE: Compulsory for vessels greater than 500 g.t., available throughout 24 hours. Vessels' Masters should forward their ETA to the pilot station 48 hours prior to arrival. Messages to be sent to the pilot station, which listens on VHF Channel 12 or to "Compamare", listening on Channel 16 and working on Channels 11 and 14. Pilot boarding/disembarking

position for the East Channel (Canale di Levante) is 1.0 nautical mile 169(T) from the Diga Duca d'Aosta red light, and in the West Channel (Canale di Ponente) on Lat. 40 48.9' within the channel. 12 Pilots and three motor launches available.

Contact Tel: +39 (081) 552 7175.

Fax: +39 (081) 552 7580.

Email: pilotina@portnet.it

Web: www.pilotina.portnet.it

ANCHORAGES: Approximately 70 anchorages, having depths ranging from 11 – 15 m.

PRATIQUE: Free pratique may be requested by radio to “Sanimare Naples” between 12 – 6 hours before arrival advising vessel’s name, nationality, last port, number of passengers and crew, and state of health on board. Pratique is automatic for vessels coming from ports in EU countries.

PRE-ARRIVAL INFORMATION: Vessels should send their ETA to the Port Authority 48 hours prior to arrival. Vessels bound for the anchorage should forward their ETA to the Operations Centre on VHF Channel 14 at least one hour prior to arrival.

VHF: The Port Authority listens on Channel 16 and operates on Channels 11 and 14. Tugs operate on Channel 10. Also see “Pilotage”.

All vessels entering/leaving the port should report to the Operations Centre on Channel 14, providing the following:

- vessel’s name and class/type
- last port of call or destination
- description of cargo.

TUGS:

- Four tugs available from 0600 – 1800 hrs.
- Three tugs available from 1800 – 2200 hrs.
- Two tugs available from 2200 – 0600 hrs.

BERTHS: Naples is the main port in the south of Italy, and is classified amongst the top domestic multi-purpose ports. The equipment and facilities available make it capable of providing a full range of services, such as to cover a wide range of traffic, including general cargo, standard containerized goods, solid and liquid bulks, oversized cargoes.

Services and Facilities: Full assistance and a wide range of services are available in the Port of Naples to both ship cargoes, passengers and crew.

Worth mentioning are: 24 hour Pilot, tug and mooring men services; several ship repair shops duly equipped for any sort of repair work; dry docks and floating dry dock; a wide range of marine supplies (ship chandlers, catering, etc); a Maritime Health Commissary and a veterinary centre. Water supply to ships is provided through a wide net, with no limitation in terms of quantity and service time. Withdrawal of slops. An extremely modern automatic firefighting system at the oil wharf. Door to door goods can be easily moved either to final destination: the port of Naples is directly linked to the national motorway network for southern Italy, northern Italy and Europe. The port rail system connects all piers to the rail shunting station inside the port, where container block-trains are formed.

CRANES: Electric: 212 tons (with hook); 212 tons (with hook and bucket); 1015 tons (with hook), 120 tons (with hook).

Floating: 1100 ton (Italian Navy) and 160 ton at dry docks.

WASTE DISPOSAL: Facilities available by truck or barge at the berth. *Garbage disposal is compulsory.*

SLOPS DISPOSAL: Facilities available by truck or barge at the berth.

MEDICAL: Hospital located 3 km. from the port. *Tel: +39 (081) 761 2060.*

FRESH WATER: Water pipelines are connected to all wharves and piers in Port. Water barges available.

FUEL: All grades available. Delivered by barge, subject to advance notice given.

DRY DOCK: Three graving docks with dimensions as follows:

- *Length 113 m., width 20.5 m.*
- *Length 202 m., width 28.9 m.*
- *Length 349 m., width 45 m.*
- *In addition one floating dock:*
- *Length 233 m., width 37 m.*

REPAIRS: All types of ship repairs can be carried out by the shipyards of Societa Bacini Napoletani and CAMED (Cantieri del Mediterraneo Spa).

POLICE/AMBULANCE/FIRE:

- Police Tel: 113;
- Fire Tel: +39 (081) 446555 or 115;
- Ambulance Tel: +39 (081) 752 0697,
- or call 113 and ask for service required.

TIME: GMT plus 1 hour. *Summer-time: March to September GMT plus 2 hours.*

HOLIDAYS:

Local and national holidays:

- New Year's Day (1 January);
- Epiphany (6 January);
- Liberation Day (25 April);
- Labour Day (1 May);
- Easter and day after Easter;
- Assumption B.V. Maria (15 August);
- Local Saints' Day (19 September);
- All Saints' Day (1 November);
- Immaculate Conception (8 December);
- Christmas Day (25 December);
- and 26 December.

CONSULS:

TELEPHONES: Telephone system permits the connecting up of the ships in all berths with the city network.

NEAREST AIRPORT: Capodichino International Airport, 15 km.

CUSTOMS: 300 cigarettes, 50 cigars, 250 grams of smoking tobacco, 1 litre of distilled drinks and alcoholic drinks over 22, 2 litres of distilled drinks and alcoholic drinks, aperitives, tafia, sake or similar drinks less or equal to 22, 1 litre of non-denatured alcohol equal or over 80, 2 litres of sparkling wine and 2 litres of table wine, 500 grams of coffee, 100 grams of tea, 50 grams of perfume and 0.25 litre of eau de toilette per person, if from an EU country.

IDENTIFICATION CARDS: Shore passes given by local police.

GENERAL:

Terminal Contact Details:

MECOSER spa.

Tel: +39 (081) 522 5252.

Fax: +39 (081) 842 5237.

Email: mecoser@portnet.it.

SOTECO.

Tel: +39 (081) 752 4120.

Fax: +39 (081) 752 4142.

Email: soteco@portnet.it

Cargo Service srl.

Tel: +39 (081) 554 6890.

Fax: +39 (081) 554 9737.

Con-Tras srl.

Tel: +39 (081) 734 9295.

Fax: +39 (081) 734 9337.

Telex: 722079.

Euroterminal srl.

Tel: +39 (081) 752 0075.

Fax: +39 (081) 752 3863.

Telex: 720029

Useful Contact Numbers:

Taxi: +39 (081) 556 4444.

AUTHORITY: Autorita Portuale di Napoli, Piazzale Pisacane, 80133 Napoli, Italy. **Tel:** +39 (081) 228 3111, 206485, 563 5548. **FAX:** +39 (081) 206888. **Email:** apsegrecoord@tin.it.

Web: www.portnet.it/napoli. **Contact:** Captain Ubaldo Scarpati, *Harbour Master*.

PUTOVANJE OD LUKE POLASKA DO LUKE DOLASKA

Pri izlasku iz luke Napoli u Italiji trebat će se proći kroz odgovarajuću separacijsku zonu koja je namjenjena izlasku iz luke. Sve do Gibraltara ne će biti značajnijih promjena u navigaciji. Do Gibraltara ima oko 920 nautičkih milja vožnje i vremenski brodu do tamo treba 2 dana i 12h. Što znači da je ETA za Gibraltar 07/05/2018 u 20:00 LT. Prilikom prolaska kroz Gibraltar, tj. separacijsku zonu Gibraltara postoji obveza javljanja u nadležni VTS centar, a to vrijedi za brodove:

1 Categories of ships required to participate in the system

1 - Categories of ships required to participate in the system

1.1 Ships of the following general categories are required to participate in the reporting system:

1. all ships of 300 gross tonnage and over;
2. all ships, regardless of gross tonnage, carrying hazardous and/or potentially polluting cargo, as defined in paragraph 1.4 of the Guidelines and criteria for ship reporting systems (resolution MSC.43(64));
3. ships engaged in towing or pushing another vessel regardless of gross tonnage;
4. any category of vessel less than 300 gross tonnage which is using the appropriate traffic lane or separation zone in order to engage in fishing; and
5. any category of ships less than 300 gross tonnage which is using the appropriate traffic separation zone in an emergency in order to avoid immediate danger.

Exemption

1.2 Recognizing that regular cross-Strait ferries, including passenger high-speed craft, generally operate according to published schedules, special reporting arrangements can be made on a ship-by-ship basis, subject to the approval of both TARIFA TRAFFIC and TANGIER TRAFFIC.

A izvještavanje se obavlja putem VHF uređaja:

3 Format report

3 - Format, content of report, times and geographical positions for submitting reports, authority to whom reports should be sent, available services

The ship report short title "GIBREP" shall be made to the ship reporting centres located at TARIFA and TANGIER. Report should be made using VHF voice transmissions.

Izvješća se šalju nakon što se prođu određene pozicije kako su navedene:

3.3 Geographical position for submitting report

3.3.1 Westbound traffic should report to TARIFA TRAFFIC on the Spanish coast when crossing the meridian 005° 15'.00 W (appendix).

3.3.2 Eastbound traffic should report to TANGIER TRAFFIC on the Moroccan coast when crossing the meridian 005° 58'.00 W (appendix).

3.3.3 Reports to the nearer of the two shore stations should be made on departure from the limits of a port or anchorage within the coverage area, except vessels departing from Tangier-Med ports and its anchorage areas which should report to TANGIER TRAFFIC (appendix).

3.3.4 Further reports should be made to the relevant shore station whenever there is a change of navigational circumstances, particularly in relation to items Q and R of the reporting format detailed in section 3.2.

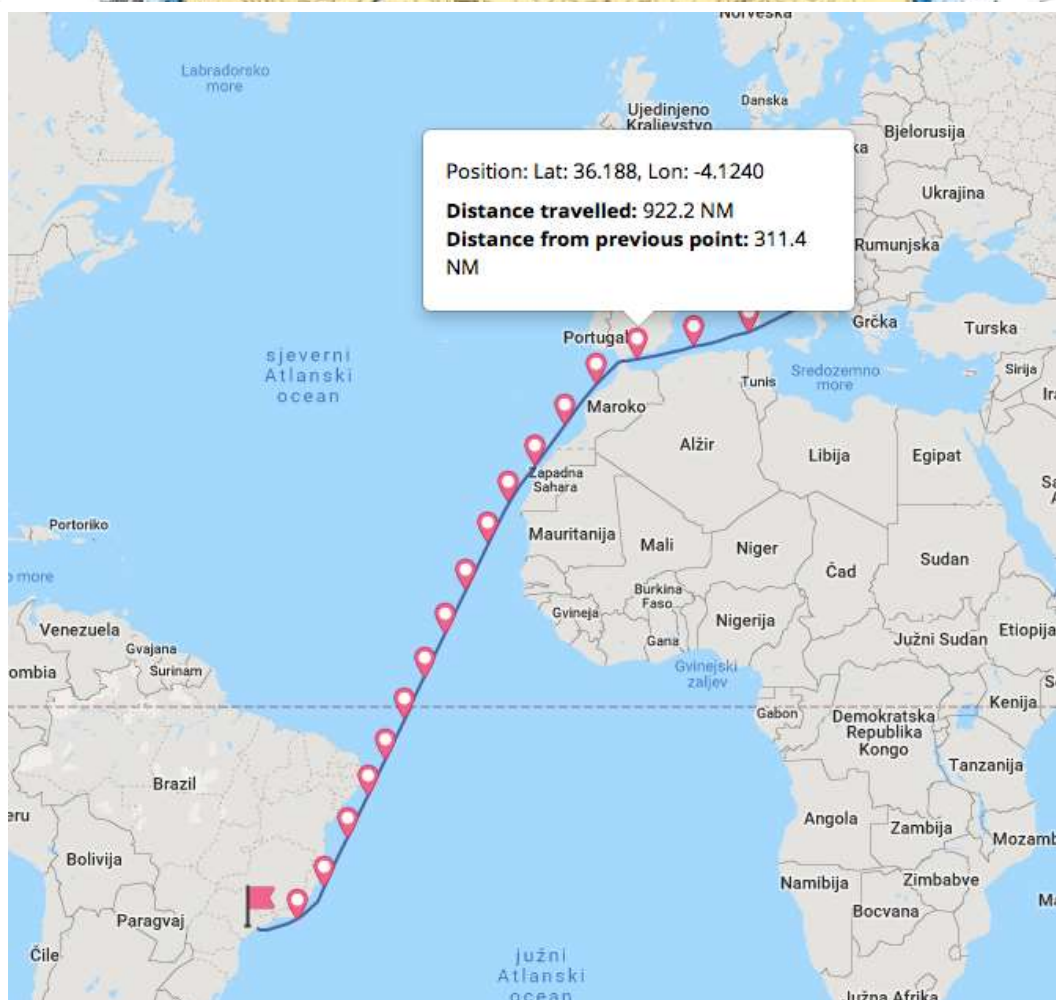
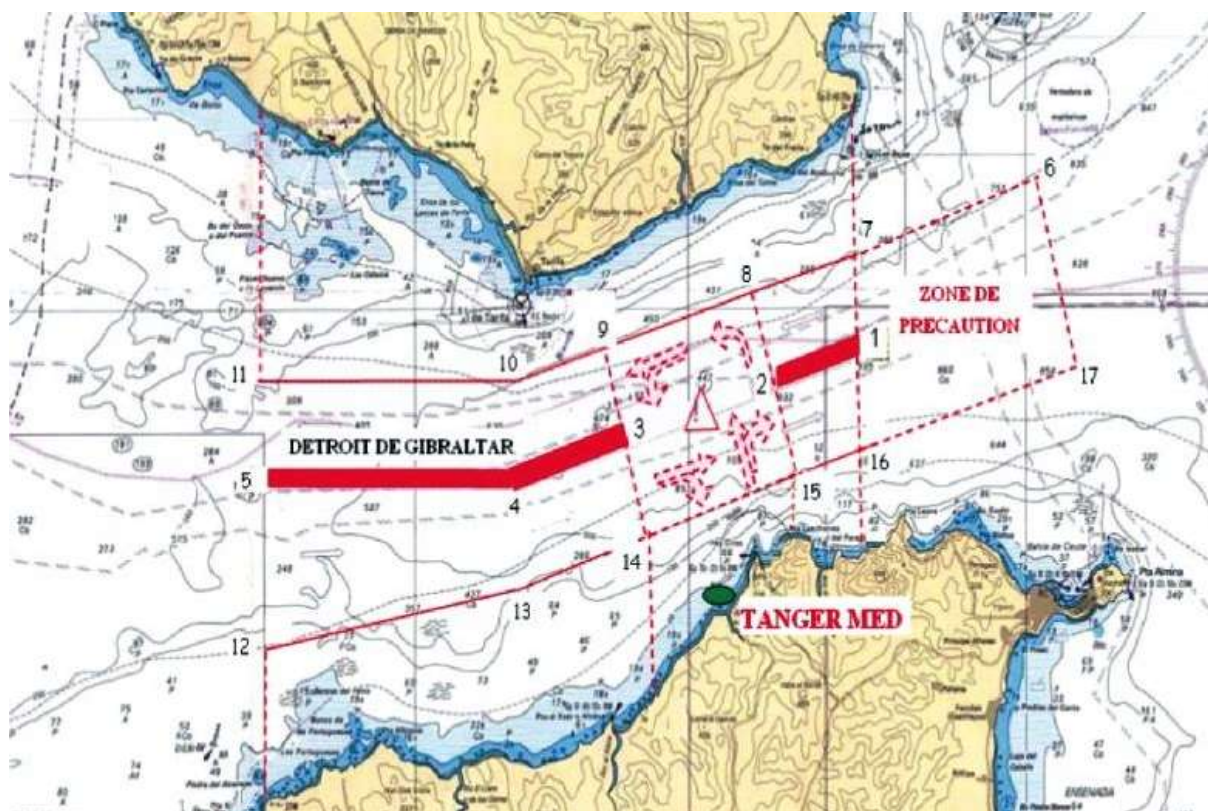
Nadležne službe i njihovi pozivni znakovi:

3.5.1 Both TARIFA and TANGIER Centres monitor navigation in the TSS in the Strait of Gibraltar using radar and AIS.

3.5.2 Each of them provides regular information about weather and navigational condition, this information is broadcast at and on the following times and frequencies:

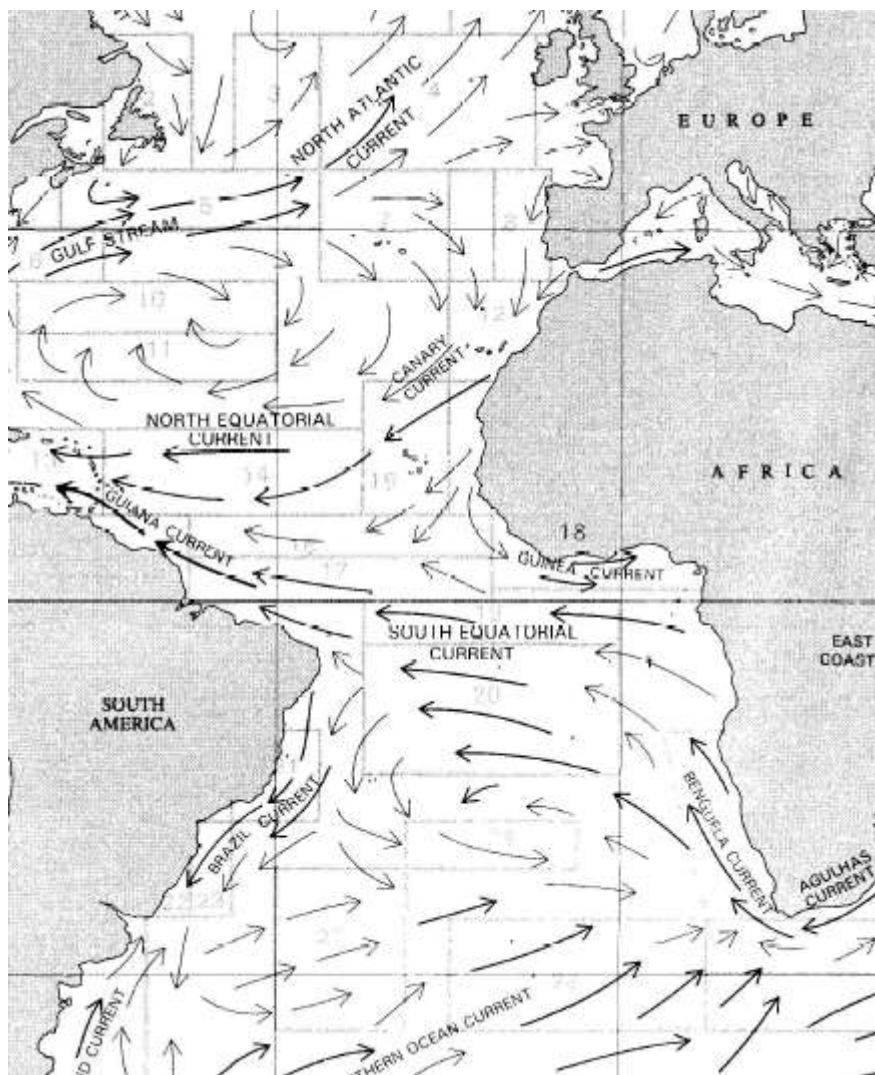
Station	Frequency	Broadcasting hours (U.T.C)
Tarifa (Call sign: TARIFA TRAFFIC)	VHF Ch 10	00h15; 04h15; 08h15; 12h15; 16h15; 20h15
Tangier (Call sign: TANGIER TRAFFIC)	VHF Ch 69	02h15; 06h15; 10h15; 14h15; 18h15; 22h15

Prolazak kroz Gibraltar i separacijska zona:

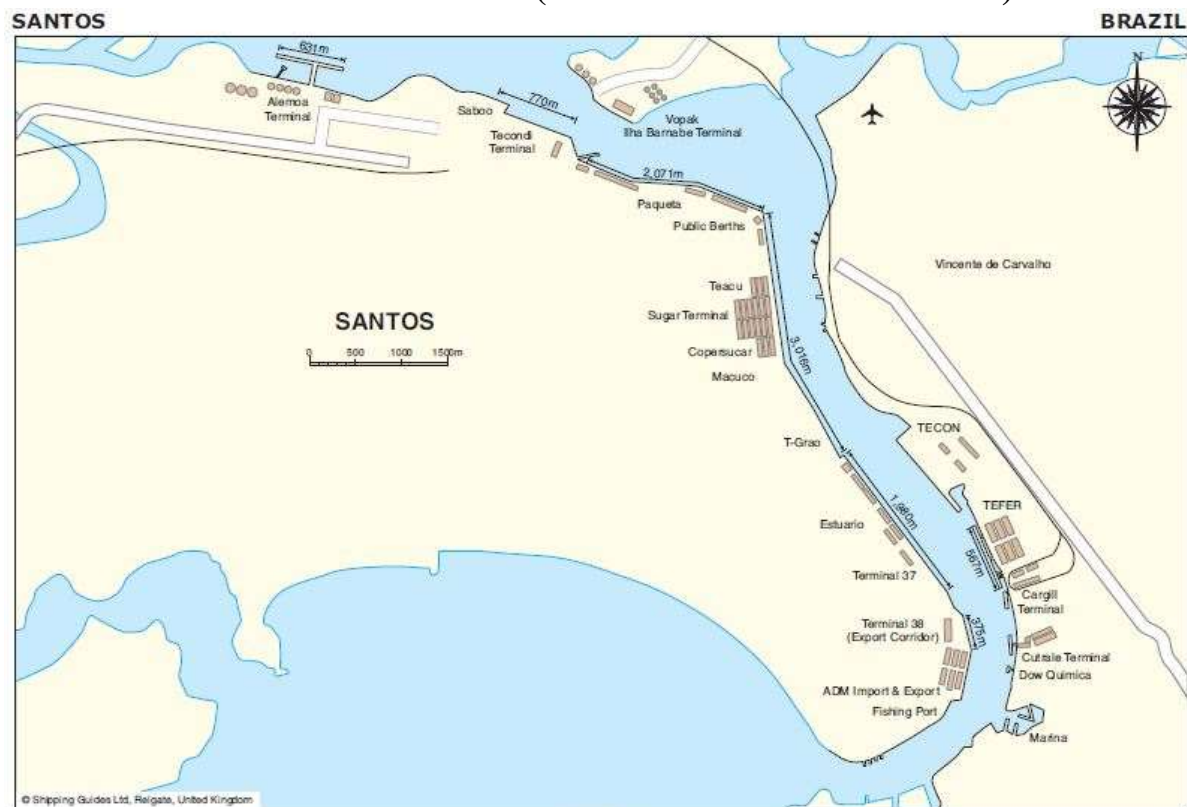


Nakon Gibraltara sljedi plovidba po Atlantskom oceanu. S obzirom da se plovi u svibnju vrijeme je već povoljnije. Vjetrovi će na većem dijelu biti umjereni NE ili SE jačine do maksimalnih 20čv.

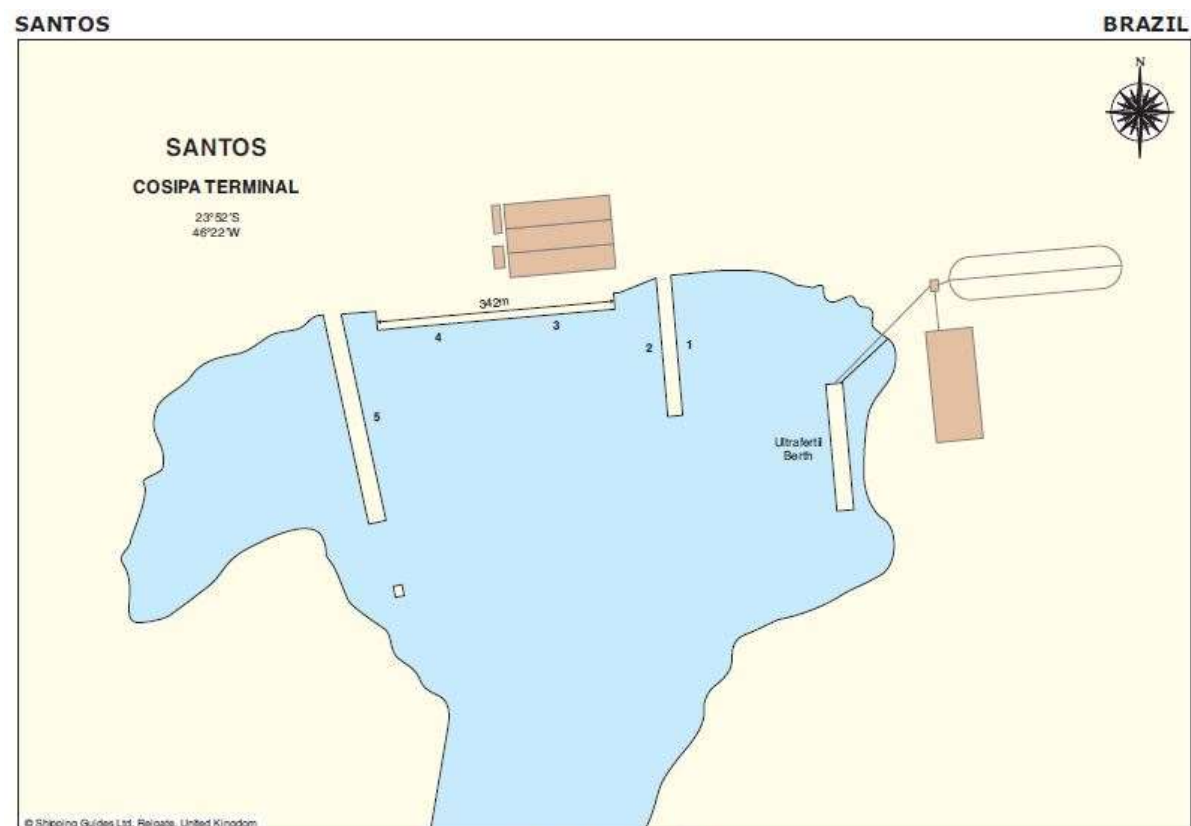
Morske struje će se u potpunosti iskoristiti kako bi se postigli optimalni uvjeti tijekom putovanja. Sa slike vidimo kako ćemo iskoristiti Kanarsku struju, zatim će nam dolaziti struja (South Equatorial Current) po lijevom boku broda koja će biti stalna oko 50% do 75%, nakon toga opet povoljno iskorištavamo Brazilsku struju.



PORT OF ARRIVAL: SANTOS (Sao Paulo: 23 56'S 046 19'W)



Layout



COSIPA Terminal

OVERVIEW: Large river port handling a variety of cargoes.

LOCATION: In the centre of the State of Sao Paulo, and the port installations spread over an estuary bounded by the islands of Sao Vicente and Santo Amaro.

CHARTS:

- Brazilian Charts No. 1701 and 1711 (DNH).
- BA Charts No. 19, 530 and 3980.
- USNOO Chart No. 24142.

PORT LIMITS:

Bounded by:

- Lat.: 24_ 02' 42" S, Long.: 046_ 24' 00" W, Ponta do Itaipu
- Lat.: 24_ 02' 42" S, Long.: 046_ 17' 24" W, Ponta do Manduba
- Mar Pequeno
- Channel of the port of Santos
- Piacaguera Channel.

DOCUMENTS: The following documents are required for clearance inwards.

- **Port Health Authorities (Sanitary):**
 - Ballast Report,
 - 1 Crew List (stating full name, ranking, nationality, place/date of embarkation, place/date of birth and Seaman's Book number),
 - 1 Maritime Declaration of Health,
 - 1 Narcotics List,
 - 1 Passenger List (stating full name, nationality, place/date of embarkation and passport number),
 - 1 Ports of Call List,
 - 1 Yellow Fever Vaccination List.
- **Immigration (Federal Police):**
 - 3 Arms/Ammunition Lists.
 - 5 Crew Lists
 - 3 Narcotics Lists
 - 5 Passenger Lists (if any)
- **Customs:**
 - 3 Bonded Stores Lists
 - 3 Crew Effects Declarations

- 3 Crew Lists
- 3 Deck Stores Lists
- 3 Engine Spares Lists
- 3 Passenger Lists
- 3 Provisions Lists
- 3 Radio Spares Lists

- **Port Captaincy:**

- 1 Crew List
- 1 Last Class Survey Report (Bulk carriers over 20 years old only (copy)).
- 1 Last Port State Control Report (copy)
- 1 Registry Certificate (copy)
- 1 Safe Manning Certificate (copy)

Note: All items missing from Stores Lists (deck, engine, radio, tools, etc.) and found during Customs inspection will be confiscated. Also see “Shipmaster’s Report” dated April 2010.

MAX. SIZE: Draft 11.58 m. *Also see “Restrictions”.*

DENSITY: 1016.

RESTRICTIONS: Official max. draft 10.97 m. Vessels drawing 10.97 m., but not exceeding 11.58 m., shall only be piloted at HW. Maximum draft at night is 10.36 m. (HW) for Sections B and C.

Speed Regulations: The maximum allowed speed for safe navigation in the channel is 8 knots. Moored vessels must be passed so that no hindrance or inconvenience from suction and backwash may be caused.

ARRIVAL: Notices to be given and NOR to be accepted as per charter party. NOR to be tendered on arrival at the outer roads.

APPROACHES: Vessels approaching the Santos area can expect to meet numerous trawlers, some of which may be unlit at night. The area around Moela Island provides poor radar targets, whereas the points of Munduba and Itaipu to the West and the area around Santos provide good radar targets. Mariners should not confuse the urban areas around Guraruja (east of Santos) and Praia Grande (West of Santos) with the city itself. There is good access to the outer anchorage where Pilots embark, although mariners can expect to meet numerous vessels at anchor or awaiting Pilots.

Companhia Siderurgica Paulista (COSIPA): The terminal is located in position Lat. 23° 52' 20" S, Long. 046° 22' 30" W, at the extremity of the Piacaguera Approach Channel,

approximately 12 n.m. from Santos Port Outer Roads, and 60 km. from the city of Sao Paulo. The approach channel is 2.6 n.m. long, dredged to 12 m. and is marked by 18 light buoys.

Turning Basins: The basins have a diameter of 460 m. and 210 m., and are located west and east of the terminal.

PILOTAGE: On arrival in the outer roads, or when changing position, vessels must contact Santos Pilot Station service control on VHF Channels 11 or 16 and advise their position and time of anchoring. The Pilot must be requested from the “Associacao de Praticagem de Santos” at least 2 hours prior to arrival, by telephone, VHF or any other communication process, sending message to PPS Coastal Station in Santos, stating time of Pilot’s embarkation. The Pilots Association maintains permanent watch on VHF Channel 16. Pilot boarding area is NW of Palmas Island in position Lat. 24° 00' 55" S, Long. 046° 00' 20" W, although Pilots can be embarked/disembarked in the channel at Lat. 24° 00' S. The pilot boarding ladder must be in accordance with SOLAS. Vessels with a Pilot on board must fly the “H” flag. Fines may be imposed for non compliance.

Pilotage Areas: Blue Area: Santos export corridor (warehouses 29 – 39) and terminals in Guarujá (left side of channel), from Torre Grande to Fortaleza da Barra.

Yellow Area: Warehouse 27 to Saboo shed (Porto Antigo), inner anchorage and terminals on Guarujá (left side of channel), from Barnabe Island to Torre Grande.

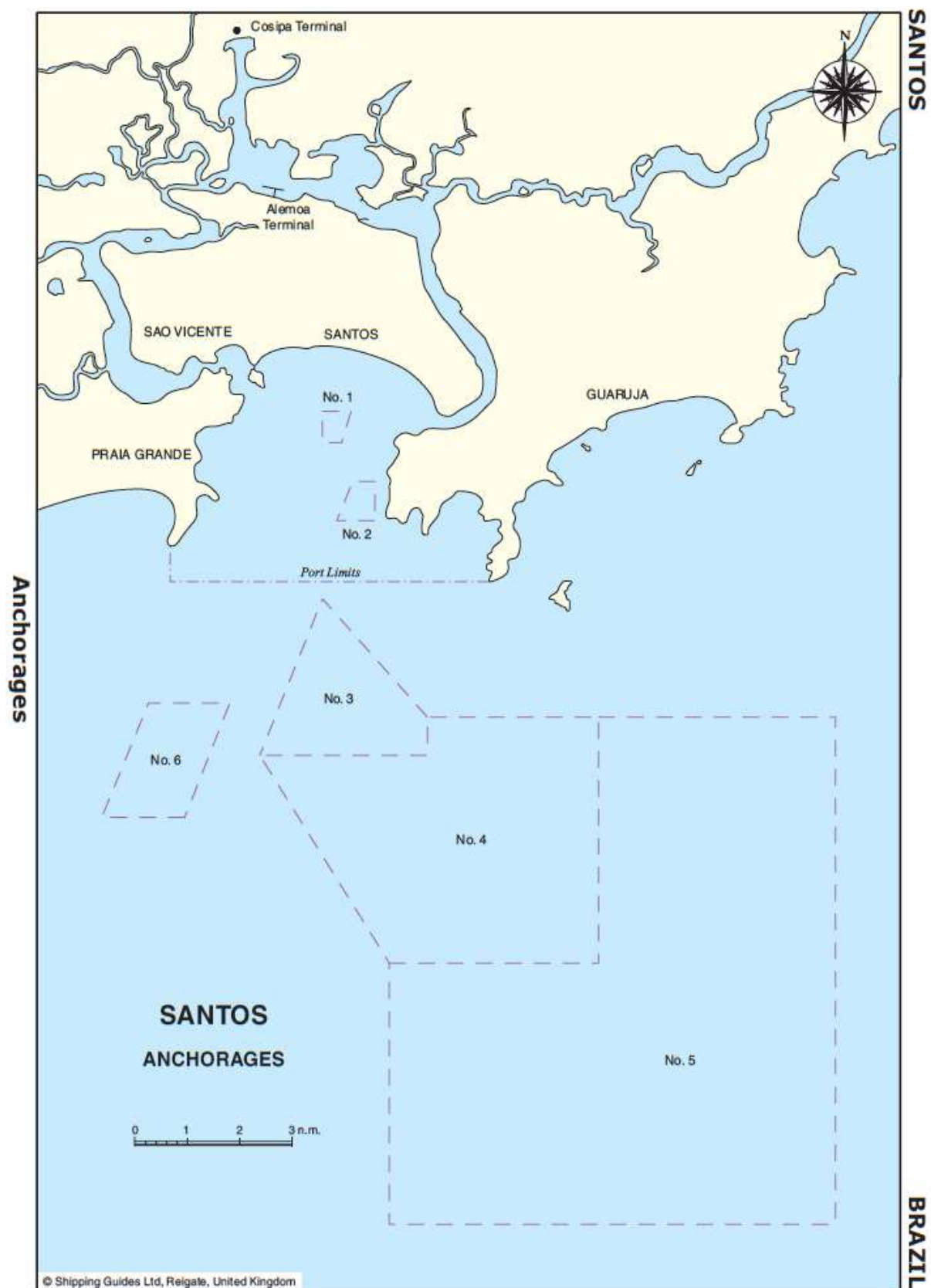
Red Area: Alamoia Liquid Bulk Terminal.

Green Area: Cubatao Port Complex.

The access channel is divided into four sections (A, B, C and D) as shown on Brazilian Chart No. 1701. Depths between dredging operations may vary due to silting. Mariners should consult Notices issued by the Port Authority to verify actual depths. Vessels with a draft greater than 10.9 m. can only enter the channel on a flood tide. At night, vessels with up to a maximum draft of 9.1 m. can navigate Sections B and C. All vessels navigating in the Piacaguera Channel must be assisted by tugs. The Port Captaincy must receive agreement from the Pilots Association before vessels with LOA greater than 228 m. can navigate the Piacaguera Channel at night. Also see “Tugs”.

ANCHORAGES: Anchoring in Anchorage No. 1 is allowed only for 24 hours, but an extension of stay may be obtained from Harbour Master’s Office in special cases. Due to strong northwesterly winds, common in this area, Masters are advised to have vessel’s engines and crew on stand-by. Navigating and anchoring near military fortresses of Itaipu (“Itaipu”) and Guarujá (“Andradas”) is prohibited. All craft are requested to keep clear of

the areas of Morro do Itaipu (Itaipu Hill) and Morro do Munduba (Munduba Hill) within a range of 100 m. The co-ordinates below refer to Brazilian Charts No. 1701 and No. 1711.



PRATIQUE: Health Authorities consisting of one doctor and two assistants will check vaccination certificates (cholera and yellow fever) and issue a Free Pratique Pass, which shall remain on board for presentation at subsequent Brazilian ports of call. Masters can obtain free pratique by radio, which does not mean that the doctor will not come on board, but only that other authorities can board the ship before his arrival. Arrange through Agent.

Immigration:

- **Tel:** +55 (13) 3221 2701, 3221 2731.

Port Health:

- **Tel:** +55 (13) 3219 1367
- **Fax:** +55 (13) 3219 2923.

VHF: Santos Coastal Station listens on VHF Channel 16 and works on VHF Channels 24, 25, 26 and 27.

VTs/RADAR: Ship Reporting System: Compulsory system in effect for vessels over 20 g.t. Call sign ‘‘PWS 88’’. VHF Channels 16, 11, 12, 13, 14, 68, 69, 71 and 74.

Procedure:

Vessels should report:

- On anchoring
- On leaving an anchorage
- Abreast of Ilha das Palmas (inward-bound)
- Immediately before leaving berth (outward-bound) Vessel’s name

They report following information:

- Call sign
- Flag
- Port of departure/Destination (inward/outward)
- Type of vessel
- Anchorage or berth/Estimated date of arrival at destination (inward/outward)
- Estimated date of departure/Cruising speed (inward/outward)
- Vessels shifting anchorage or berth report vessel’s name, call sign, and previous and present position.

Reports are to be in Portuguese (request assistance in transmission from Pilot, Pilot Station or Santos (PPS) Channel 16, as necessary). Vessels unable to contact the Control Post inform the Captaincy of the Ports of the State of Sao Paulo stating vessel’s name, date, time (GMT) and reason for not reporting. Also see ‘‘General’’ before first Brazil port.

TUGS: 16 tugs available (1,010 – 3,000 h.p.) operated by four companies. Tugs maintain a listening watch on VHF Channels 10, 13 and 16.

- **Note:** Should no tug of the indicated power be available, tugs of immediately superior power should be requisitioned. Vessels with bow-thrusters may employ one tug instead of two in certain operating areas. The use of two tugs, one of which must be made fast, is compulsory in the Piacaguera Channel. Vessels with draft exceeding 10.97 m. can only navigate in daylight and must be assisted by four tugs in the Section Saboo to Alemoa, and by three tugs from Alemoa to the berth. Vessels negotiating the Piacaguera Channel shall employ 2 tugs, 1 at least to be made fast. But vessels drawing more than 10.97 m. shall navigate only by daylight assisted by four tugs within Saboo/Alemoa area and 3 tugs within Alemoa/Cosipa area (only 1 vessel at a time can pass through this channel).

BERTHS: Vessels should dock, preferably against the tide.

<i>BERTH</i>	<i>LOA</i>	<i>DRAFT</i>	<i>BEAM</i>	<i>REMARKS</i>
<i>Public 12A</i>	300 m	10.60 m	40.0 m	General cargo
<i>Public 13/14</i>	300 m	10.80 m	40.0 m	General cargo

MOORING: Mooring boats are not employed by the terminal, but can be ordered via the Agent. Average distance between bollards 25 m.

CARGO HANDLING FACILITIES:

- **Public Berths:** Terminals 12-A and 13/14 are general cargo terminals equipped with grabs and three extractors. Cargoes are discharged into rail wagons and/or lorries. The average handling rate is 1,300 tonnes/day. Max. airdraft 19.0 m.

STEVEDORES: All longshoremen are in employ of Cia Docas, which holds charter for general operations at Santos Docks. Their services can be requisitioned up to 1500 hrs. for vessels at berth/expected to berth next day. Stevedores ordered but not used shall be paid full day or night. Therefore, if the men should be kept standing by (inactive) at 0700 hrs., their period runs up to 1700 hrs., and at 1900 hrs., their period runs up to 0400 hrs.

Working Hours: 4-6 hour shifts, 7 days a week, 362 days per year (No work Christmas, New Year or May Day).

Overtime: Sundays, holidays and meal hours.

COSIPA: Working Hours: The terminal works throughout 24 hours, in four shifts.

Hatches: May be performed by ship's crew or by stevedores.

WASTE DISPOSAL:

COSIPA: Barges for garbage collection are provided from Santos, approximately 9 km. from the terminal. Whilst in port, at anchor or berthed alongside the quay, vessels should collect garbage in adequate containers fitted with covers whilst those lying in open spaces should be kept with their covers on. Also see “Regulations”.

MEDICAL: Medical and dental assistance for crew arranged by the Agent. Anchored ships may request medical assistance via Santos Radio, call sign PPS, who will relay the message to the Port Health Service or to the Agent.

FRESH WATER: Normally supplied by barge.

COSIPA: Bunkering is arranged through Santos Port.

CHANDLERY:

- **Barnabe Island:** Supplying of provisions is available through the local ship chandlers: Oxygen, acetylene, refilling of fire extinguishers through Unitor representative, DSF, Extencil and others.

SERVICES: Pollution control and tank cleaning services available.

DRY DOCK:

- **Shipyards:** Santos Dock Company, Wilson Sons SA, and various others for small size craft.

POLICE/AMBULANCE/FIRE:

Emergency Tel: 2170.

Police (Warehouses 1-7) **Tel:** 315544.

Police (Warehouses 8-28) **Tel:** 325497.

Police (Warehouses 29-43) **Tel:** 369979.

SECURITY/GANGWAY: It is compulsory to have one shore watchman at the gangway. Three additional deck watchmen are recommended. Watchmen are to identify persons entering or leaving the ship. Do not permit the watchman to abandon the gangway, unless substituted by another watchman or crew member.

REGULATIONS: Should vessel use any type of small craft for embarking or disembarking, the landing ashore should take place within a Customs area. Vessels at anchor may not lower their accommodation ladder and vessels alongside may not lower the offshore gangway. Drainage of holds or tanks containing chemical products, oils or polluting substances which may affect the flora and fauna, is prohibited.

TIME: GMT minus 3 hours in winter and GMT minus 2 hours in summer.

WEATHER/TIDES:

Tides/Currents: Blows predominantly from the east force 2. Stronger winds may occur (force 3-4) from the NW and SW. Mean rise and fall is about 1.5 m.; spring tide stream may reach up to 1 knot at the flood and about 1.4 knots at the ebb. Exact figures are shown on the tide tables and tidal stream tables for the Port of Santos published by the DNH (Hydrographic Office).

TELEPHONES: Every vessel berthing between Sheds 1 – 39 will have a telephone on board, available only for local calls.

NEAREST AIRPORT: Sao Paulo International Airport, 60 km.

CUSTOMS: Tel: +55 (13) 3201 4100.

IDENTIFICATION CARDS: ID cards not required.

DEVELOPMENTS: Dredging of berths, channel and manoeuvring basins. Deepening of channel to 17.0 m.

AUTHORITY:

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PUBLIKACIJE

Admiralty tide tables:

- NP202 Volume 2 Europe (excluding United Kingdom and Ireland), Mediterranean Sea and Atlantic Ocean

Admiralty list of lights and Fog Signals:

- NP78 Volume E: West Mediterranean
- NP77 Volume D: Eastern Atlantic Ocean, Western Indian Ocean and Arabian Sea
- NP80 Volume G: Western Side of South Atlantic and East Pacific Ocean

Admiralty list of radio signals:

- NP281(1) Volume 1-Part 1, Maritime Radio Stations: Europe, Africa and Asia (exluding the Far East)
- NP281(2) Volume 1-Part 2, Maritime Radio Stations: The Americas, Far East and Oceania
- NP283(1) Volume 3-Part 2, Maritime Safety Information Services: Europe, Africa and Asia(exluding the Far East)
- NP283(2) Volume 3-Part 2, Maritime Safety Information Services: The Americas, Far East and Oceania
- NP286(3) Volume 6 - Part 3, Pilot Services, Vessel Traffic Services and Port Operations: Mediterranean and Africa (Including Persian Gulf)
- NP286(2) Volume 6 - Part 2, Pilot Services, Vessel Traffic Services and Port Operations: Europe (Excluding UK, Ireland, Channel Ports and Mediterranean)
- NP286(5) Volume 6 - Part 1, Pilot Services, Vessel Traffic Services and Port Operations: Americas and Antarctica

Paper chart list:

NUMBER	TITLE	SCALE	EDITION DATE
4011	North Atlantic Ocean Northern Part	10,000,000	Aug. 2011
4012	North Atlantic Ocean Southern Part	10,000,000	Sept. 2011
4014	North Atlantic Ocean Eastern Part	10,000,000	July 2011
4020	South Atlantic Ocean Western Part	10,000,000	Sept. 2011
4022	South America to Africa	10,000,000	June 2011
4300	Mediterranean and Black Seas	4,200,000	Oct. 2003
4301	Mediterranean Sea Western Part	2,250,000	Feb. 2012
4104	Lisboa to Freetown	3,500,000	Dec. 2011
4215	Recife to Dakar	3,500,000	June 2011
4216	North East Coast of South America	3,500,000	Dec. 2010
4200	East Coast of South America	3,500,000	Nov. 2010
4201	South East Coast of South America	3,500,000	Feb. 2011
4202	East Coast of South America	3,500,000	Feb. 2011
165	Menorca to Sicilia including Malta	1,100,000	May 2007
2717	Strait of Gibraltar to Barcelona and Alger including Islas Baleares	1,100,000	May 1995
3132	Strait of Gibraltar to Arquipelago da Madeira	1,250,000	Oct. 2010
3133	Casablanca to Islas Canarias	1,250,000	May 2012
3134	Islas Canarias to Nouakchott	1,250,000	Oct. 2006
91	Cabo de Sao Vicente to the Strait of Gibraltar	375,000	Oct. 2010

142	Strait of Gibraltar	100,000	Apr. 201
773	Strait of Gibraltar to Isla de Alboran	300000	28.1.2010
908	Golfo di Napoli and Golfo di Salerno	100,000	May 2011
914	Capo Miseno to Torre del Greco including the Approaches to Napoli	25,000	July 2010
915	Port of Napoli	10,000	Jan. 2011
916	Ports and Harbours in Golfo di Napoli	10,000	Sep. 2011
1700	Cartagena to Cabo de San Antonio including Isla Formentera	300,000	Jan. 2010
1702	Ibiza, Formentera and Southern Mallorca	300,000	Jan. 2010
1780	Barcelona to Napoli including Islas Baleares, Corse and Sardegna	1,100,000	Mar. 1993
1908	Isola D'Ischia to Capo di Bonifati	300,000	June 2010
1909	Ile Plane to Cherchell	300,000	Jan. 2010
1910	Cherchell to Bejaia	300,000	Jan. 2010
2437	Ras Tarf to Oran	300,000	Feb. 2010
3578	Eastern Approaches to the Strait of Gibraltar	150,000	May 2007
3980	Ilha de Sao Sebastiao to Ilha de Bom Abrigo	300,000	Nov. 2004

Meteorological charts

Number	Title	Scale
B6032	North East Atlantic - Meteorological Facsimile Chart	10,000,000
B6461	South East Pacific Ocean	15,000,000
B6628	South Atlantic Ocean,including parts of the Pacific and Indian Oceans	15,000,000
B6656	Mediterranean and Europe	7,500,000
B6962	North Atlantic Ocean - Central and Western Area	10,000,000
B6963	North Atlantic Ocean - Western Sheet	17,500,000
B6966	North Atlantic and Arctic Oceans Met. Working Chart	10,000,000
B6968	Atlantic Ocean (Lat 50 N - 10 S)	17,500,000
B6988	Europe and Mediterranean	15,000,000
B6992	North Atlantic Ocean	6,000,000
B6995	North Atlantic & Mediterranean	10,000,000