

Repsol Marine Terminal-to-Tanker Information

Pantalán de Repsol Petróleo, Tarragona



Dear Sir,

Responsibility for the safe conduct of operations while your ship is at the Repsol Terminal rests jointly with you, as Master of the ship, and with the Terminal Representative responsible. We wish, therefore, before operations start, to seek your full co-operation and understanding on the safety requirements set out in the Ship/Shore Safety Check-List, which is based on safe practices that are widely accepted by the oil and tanker industries.

We expect you, and all under your command, to adhere strictly to these requirements throughout your ship's stay alongside this Terminal and we, for our part, will ensure that our personnel do likewise, and co-operate fully with you in the mutual interest of safe and efficient operations.

Before the start of operations, and from time to time thereafter, for our mutual safety, a member of the Repsol Terminal staff, where appropriate together with a Responsible Officer, will make a routine inspection of your ship to ensure that elements addressed within the scope of the Ship/Shore Safety Check-List are being managed in an acceptable manner. Where corrective action is needed, we will not agree to operations commencing or, should they have been started, we will require them to be stopped.

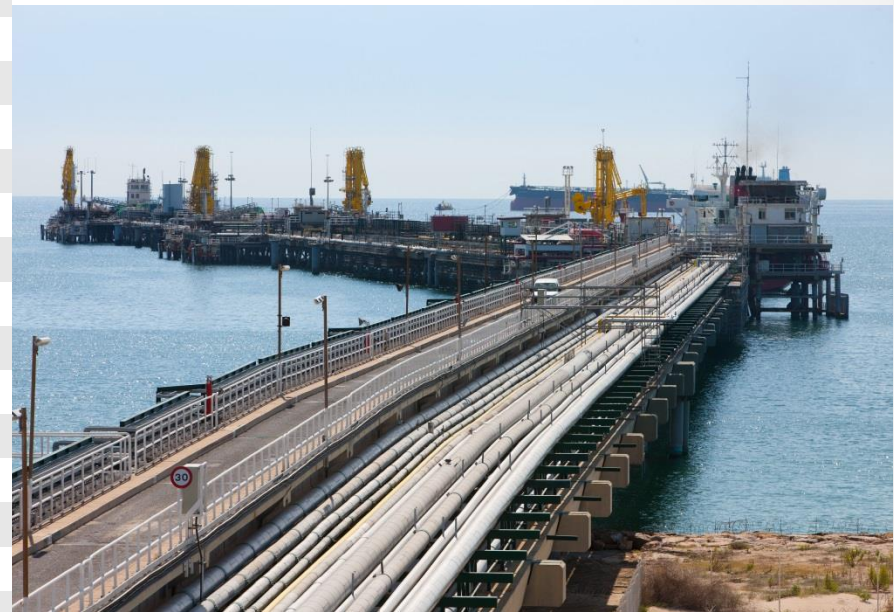
Similarly, if you consider that safety is being endangered by any action on the part of our staff or by any equipment under our control, you should demand the immediate cessation of operations.

Any repair work is prohibited without prior written permission of the Terminal Representative. Repair or other work that may immobilize the ship is always prohibited.

SAFETY AND ENVIRONMENTAL COMPLIANCE WILL NOT BE COMPROMISED

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1. GENERAL INFORMATION



The Repsol Terminal is located between the Cape of Salou and the western limit of the Port of Tarragona. It is formed by a jetty that goes into the sea 1,489 meters and includes one SBM situated 1' South of the jetty.

Jetty is formed by three platforms: P-11, P-35 and P-80 and five berths (F-11, F-35T, F35S, F-80T and F-80S).

It is designed to accommodate ships with a deadweight between 1,000 and 100,000 tons.

The beacon located at the end of the jetty consists of red flashes with a range of 7 miles.



1.1 Contact details



Pantalán de Repsol Petróleo, Tarragona

- **Address:** C/ Carretera de La Pineda s/n
Tarragona, Spain
- **Telephone number:** 977559811 / 977559801
Fax: 977559807
- **e-mail:** rptinsmarinas@repsol.com
- **Postal Address:** Apartado (P.O. Box) 472 –
43080 Tarragona



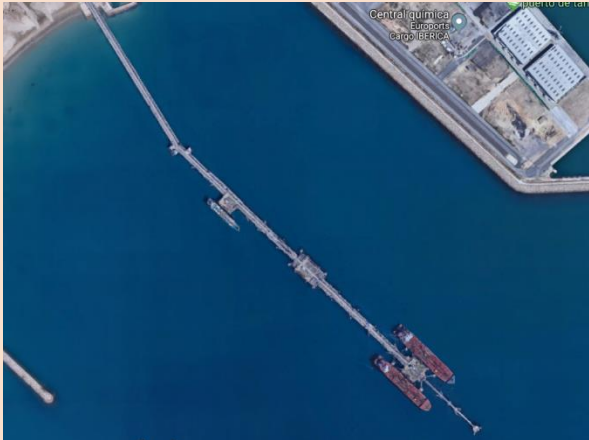
Central office Campus Headquarters, Madrid

Méndez Álvaro, 44 28045 - Madrid (Spain)
Telephone number:
Tel: 917538000 / 917538100 Fax: 902303145



1.2 Terminal information

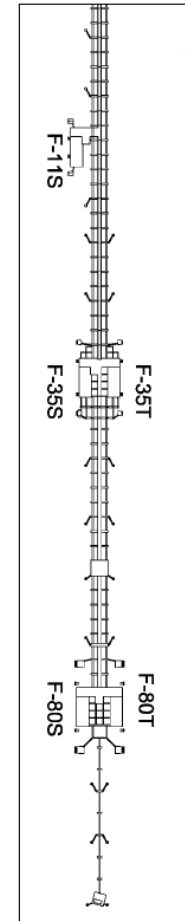
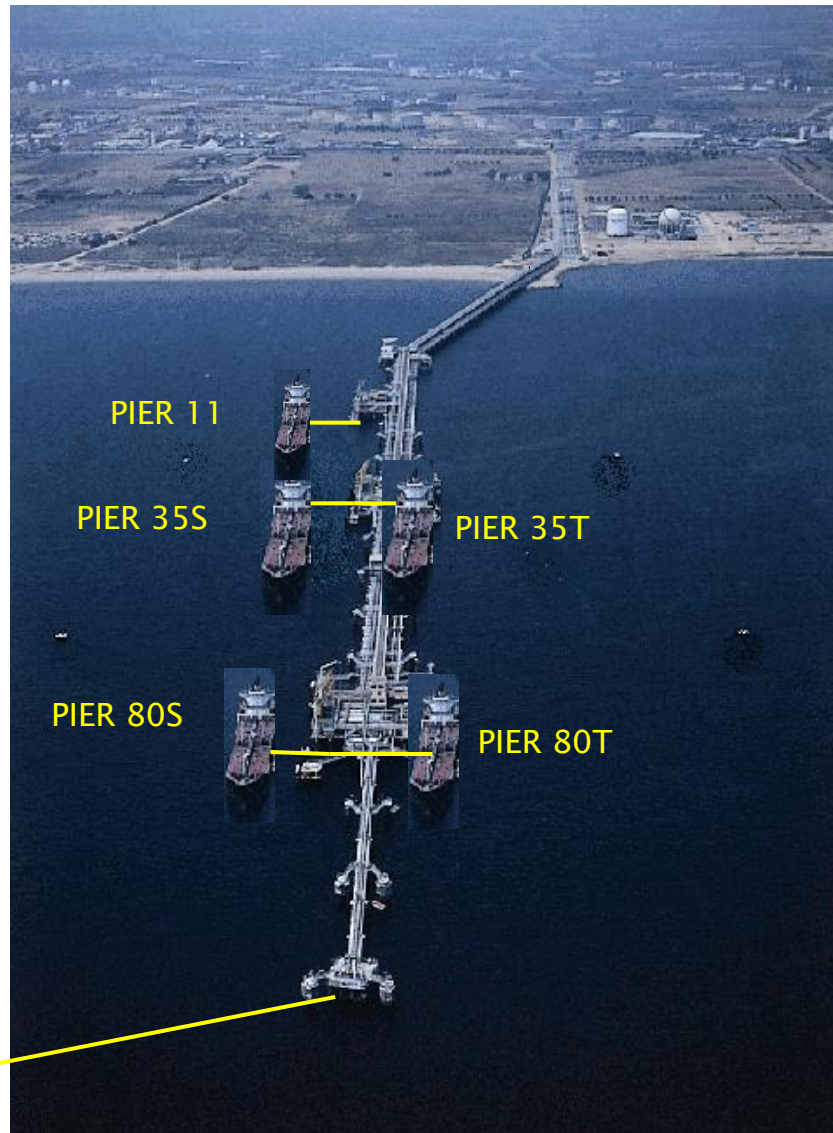


Port	Pantalán de Repsol Petróleo, Tarragona	
Location	41°05'28'' N – 001°11'49'' East	
Winds	Prevailing NW Strongest NW	
Tides	Maximum Tide Movement: 0 m. Height at LLW compared to Port zero: -0,30 m. Height at HHW compared to Port zero: +0,50 m.	
Density of seawater	1.025 – 1.028	
Communication (REPSOL)	VHF CH 10 and Operator continuously on jetty	
Pilots	Pilotage is compulsory for any vessel calling at Repsol Terminal.	
	Pilots must be contacted 1 hour before arrival at pilot station on VHF CH 14.	
Tugboats	Tugboats are available 24/7. Berthing and undocking manoeuvres of all vessel will be carried out in accordance with the following regulations dictated by Port Authority.	
	All vessels, whatever their tonnage, manoeuvring in the basin of the Terminal and which carry hazardous cargo must do so accompanied by tugs.	
	Vessels of less than 140 m with fore and aft propellers may dispense with the presence of the tugboat during undocking manoeuvre.	

2. HARBOUR FACILITIES



N



SBM

REPSOL PETRÓLEO, S.A., C.I, Tarragona, Instalaciones Marinas, October 2018.

2.2 Jetty details



CHARACTERISTICS	Platf. 11	Platf. 35 S/T	Platf. 80 T	Platf. 80 S	SBM
MAXIMUM DRAUGHT (m)	8,20	11,25	14,25	14,75	42,80
MAXIMUM LENGTH OVERALL(m)	155	230	290	290	350
MINIMUM LENGTH OVERALL (m)	74	85	140	140	--
MINIMUM BCM (m) (Bow to Center Manifold)	37	43	70	70	--
FREEBOARD (m)					
INNER FENDERS (MIN / MAX)	1,80 – 10,00	1,55 – 10,75	3,10 – 11,70	2,00 – 13,90	
OUTER FENDERS (MIN / MAX)	1,70 – 8,70	1,70 – 8,70	2,00 – 8,40	2,00 – 8,40	
MANIFOLD'S HEIGHT (m)					
MAXIMUM	11,60	14,30	16,80	16,80	
MINIMUM	1,40	2,30	3,20	3,20	
(*) SUMMER DEADWEIGHT (Tm.)					
TANKERS	11.000	40.000	80.000	100.000	325.000
(*) SUMMER DISPLACEMENT (Tm.)					
TANKERS	18.700	55.000	108.000	135.000	

Vessel must meet fully with the above specifications. On paragraphs marked with (*) to meet at least one of two required characteristics.

2.3 Jetty mooring system

Mooring system GER (Quick-release hooks)

41 mooring points with single, double and triple hooks of 60 and 100 tons of shot

- Emergency trip from several panels and one general in the main building.
- Dynamometric control of hooks in the main building



F11 4 GER(1 split)+ 4 bollards.

F35T 4 GER(2 split) + 4 bollards.

F35S 4 GER(2 split) + 4 bollards.

F80T 6 GER (1 split) + 4 bollards.

F80S 6 GER (1 split) + 4 bollards.

All fronts except the F-11 have hydraulically-operated ladders to gain access to the ship.

2.4 Loading arms



21 loading arms

All cargo arms are operated by hydraulic system.

All cargo arms have a valve with remote control from Shore Control Room.

All arms are equipped with PERC (Automatic release system in case of emergency)

All arms can be operated with remote control from the ship to facilitate manoeuvres



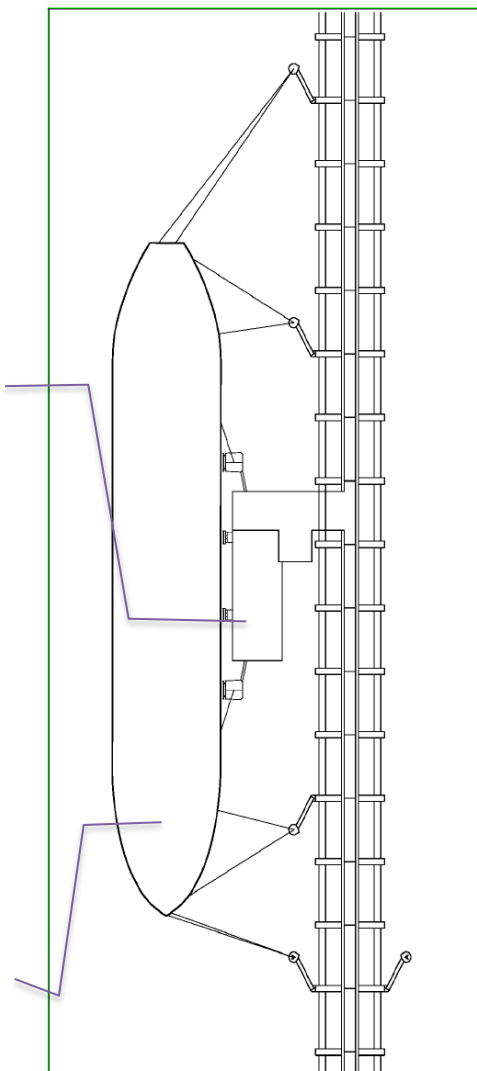
2.5 PT-11

PIER 11

Loading arms

BC-19 8", 150 press. ASA / DIN	FUEL,
BC-20 8", 150 press. ASA / DIN	ETHYLENE
BC-21 8", 150 press. ASA / DIN	ETHYLENE, PROPYLENE, PROPANE, BUTADYENE,
BC-17 8", 150 press. ASA / DIN	KEROSENE, NAPHTA, GASOLINE, SLOPS

MOORING EXAMPLE:
15,000 MT DW VESSEL



JETTY DETAILS

MAXIMUM DRAUGHT (m)	8,20
MAXIMUM LENGTH OVERALL(m)	155
MINIMUM LENGTH OVERALL (m)	74
MINIMUM BCM (m) (Bow to Center Manifold)	37
FREEBOARD (m)	
INNER FENDERS (MIN / MAX)	1,80 – 10,00
OUTER FENDERS (MIN / MAX)	1,70 – 8,70
MANIFOLD'S HEIGHT (m)	
MAXIMUM	11,60
MINIMUM	1,40
SUMMER DEADWEIGHT (Tm.)	
TANKERS	11.000
SUMMER DISPLACEMENT (Tm.)	
TANKERS	18.700

2.6 PT-35

PIER 35S

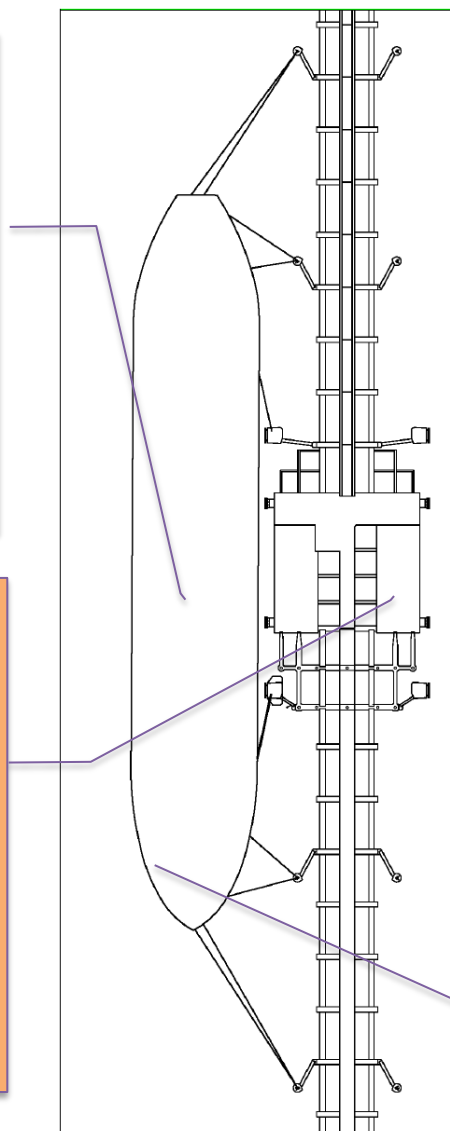
Loading arms

BC-11 12"	FUEL, SLOPS, CRUDE OIL
BC-10 12"	GASOLINE, DIESEL, PYGAS, NAPHTA
BC-121B 8" / 300lb	ETHYLENE, PROPYLENE
BC-8 8"	KEROSENE, Vapour return
BC-7 12"	VGO, RHC, FUEL, SLOPS, CRUDE OIL

PIER 35T

Loading arms

BC-16 12"	FUEL, SLOPS
BC-15 10"	DIESEL, FAME, KEROSENE, NAPHTA, Vapour return.
BC-121A 8" / 300lb	ETHYLENE, PROPYLENE
BC-13 10"	GASOLINE, DIESEL, PYGAS, NAPHTA
BC-7 12"	VGO, RHC, FUEL, SLOPS



JETTY DETAILS

MAXIMUM DRAUGHT (m)	11,25
MAXIMUM LENGTH OVERALL(m)	230
MINIMUM LENGTH OVERALL (m)	85
MINIMUM BCM (m) (Bow to Center Manifold)	43
FREEBOARD (m)	
INNER FENDERS (MIN / MAX)	1,55 - 10,75
OUTER FENDERS (MIN / MAX)	1,70 - 8,70
MANIFOLD'S HEIGHT (m)	
MAXIMUM	14,30
MINIMUM	2,30
SUMMER DEADWEIGHT (Tm.)	
TANKERS	40.000
LNG	
SUMMER DISPLACEMENT (Tm.)	
TANKERS	55.000

MOORING EXAMPLE: 45,000 MT DW VESSEL

2.6 PT 80



PIER 80S

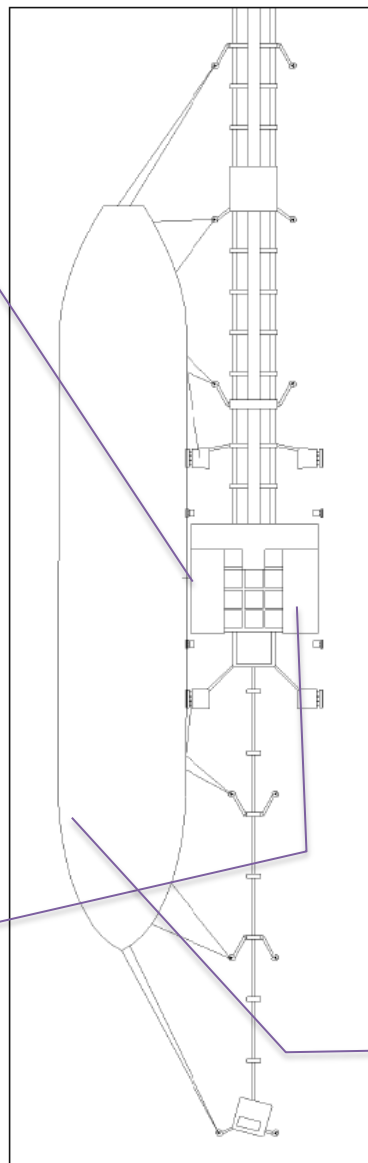
Loading arms

BC-4	12"	GO, NAPHTA, KEROSENE
BC-3	12"	FUEL, CRUDE OIL
BC-2	12"	FUEL, CRUDE OIL
BC-1	12"	FUEL, CRUDE OIL, NAPHTA

PIER 80T

Loading arms

BC-103	12"	NAPHTA, KEROSENE
BC-101	8"	PROPANE
BC-102	8"	NAPHTA



JETTY DETAILS

	80-S	80-T
MAXIMUM DRAUGHT (m)	14,25	14,75
MAXIMUM LENGTH OVERALL(m)	290	290
MINIMUM LENGTH OVERALL (m)	140	140
MINIMUM BCM (m) (Bow to Center Manifold)	70	70
FREEBOARD (m)		
INNER FENDERS (MIN / MAX)	3,10 - 13,90	2,00 - 11,70
OUTER FENDERS (MIN / MAX)	2,00 - 8,40	2,00 - 8,40
MANIFOLD'S HEIGHT (m)		
MAXIMUM	16,80	16,80
MINIMUM	3,20	3,20
SUMMER DEADWEIGHT (tm.)		
Tankers	100.000	80.000
LNG		55.000
SUMMER DISPLACEMENT (TM.)		
Tankers	135.000	108.000
LNG		95.000

MOORING EXAMPLE:
130,000 MT DW VESSEL

2.7 SBM

SBM (Single Buoy Moorings)

SUPPLY FOR CRUDE OIL TANKERS OF DEADWEIGHT BETWEEN 100,000 AND 325,000 MT.

LOCATION: 41°04'00" N – 001°13'20" East
(one mile from entrance to Tarragona port from the end of the pier)

HEIGHT

4,8 m.

INTERNAL DIAMETER

3,73 m.

EXTERNAL DIAMETER

11,0 m.

ACTIVE ESCORT BY TUG REQUIRED.

BERTHING AVAILABLE UNTIL 2H BEFORE
SUNSET



DAYTIME WEATHER RESTRICTIONS:

- MAXIMUM WIND SPEED: 40 knots
- MAXIMUM WAVE HEIGHT: 2,5 m

SBM DETAILS



CHAIN STOPPER REQUIREMENTS

- 2 bow chain stoppers, swl 200 mts
- 2 bow closed fairleads of OCIMF recommended size (600 mm x 450 mm)
- Maximum distance stopper bracket to bow fairleads 5,0 mts
- 30 meters maximum height chain stoppers to sea-water



CARGO TRANSFER CONNECTIONS

- 2 hoses will be connected
- 1 cargo hose of 16 inches for cargo operations
 - 1 hose of 10 inches for flushing shore line with fresh water after complete discharge operations

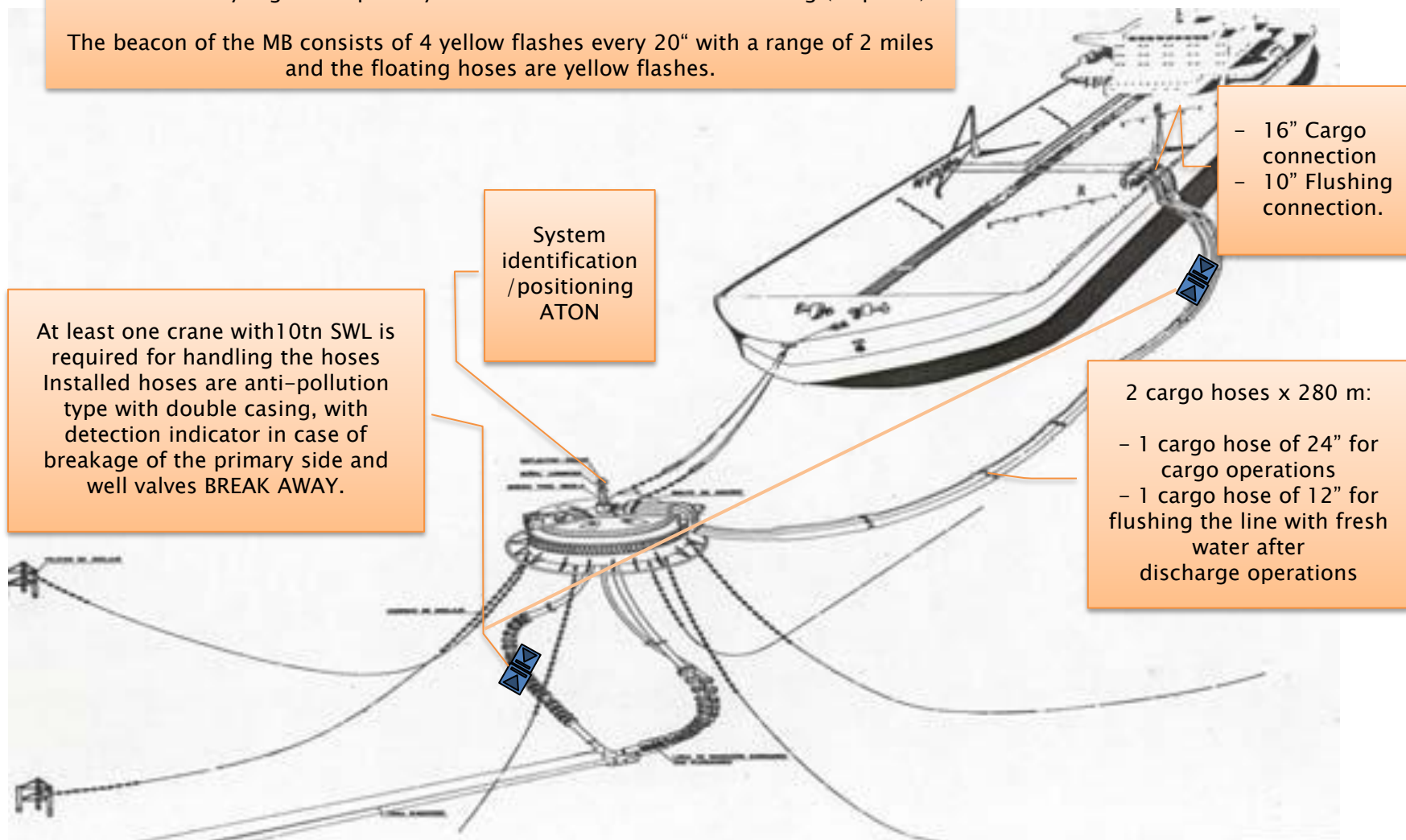
MAX. DISCHARGE RATE: 9.000 M3/H

AFTER DISCHARGE OPERATIONS, SHORE LINE IS FLUSHED WITH 200 c.b.m OF FRESH WATER SUPPLIED BY SHORE AND USING SHIP MANIFOLDS AND MARPOL LINE

The SBM mooring system is formed by two chains of 7mts length. Each of them have attached one big rope of 18" and 60mts length, with a breaking load of 478 tons, and messenger line of 4" and 120mts length.

Use of stand-by tug is compulsory. It is made fast astern after berthing (ship line)

The beacon of the MB consists of 4 yellow flashes every 20" with a range of 2 miles and the floating hoses are yellow flashes.



2.8 HEADS.

Terminal is equipped by HEADS (Hydrocarbon Early Automatic Detection System) to prevent and monitor pollution and oil spills



- Coupled-sensors: radar, IR-VIS cameras, weather parameters.
- Intelligent algorithm to process data; automated alarm generation, with remote reception.
- Output information is transferred to a monitoring console, allowing visualization and manual operation.



3. PROCEDURES AND RESTRICTIONS



SMOKING in all areas of the Maritime Terminal is strictly PROHIBITED

<i>VHF, AIS, Radars and Main radio aerials</i>	Transmissions by medium and high frequency radio during load, discharge or ballast operations are not permitted. Main transmitting antennae must be earthed or insulated.
	To start or test the radar during load, discharge or ballast operations, the vessel must ask permission from the Repsol duty Loading Master.
	During load or discharge operations AIS equipment must transmit on its minimum power of 1 watt.
	Portable VHF/UHF radiotelephones must be intrinsically safe and officially approved
<i>Mobile telephones, cameras and other equipment</i>	For reasons of security it is prohibited to take photos or video recordings of vessels or of the facilities. To take any photo or video permission must be asked from the Repsol duty Loading Master.
	The use in of video cameras, cellular phones or other equipment which may generate heat or sparks which could ignite flammable materials or combustible can only be authorized if the equipment has adequate protection for use in flammable or explosive atmospheres and has the corresponding certificate.
<i>General lighting</i>	The main deck, the manifold area and areas along the side of the vessel must be adequately illuminated to ensure better and safer work of personnel engaged in night operations of connection and disconnection and the easy location of any leak or spill.
<i>Lights and Lanterns</i>	It is not permitted to use on deck or in open spaces any light apparatus which is not suitable for flammable or explosive atmospheres.
	Vessel and Terminal will ensure that in their facilities there is no broken light fitting or the presence of defective cables which might generate heat or sparks sufficient to be an ignition source for flammable or combustible materials.
<i>Repairs</i>	Repair to main engines or deck machinery is prohibited when the vessel is secured to any berth.
<i>Emergency escape</i>	The lifeboat on the sea side of the vessel must be unlashd and ready for use from the embarkation deck. Vessels which have a lifeboat only at the stern will have it prepared and ready for use.

3.1 Requirements for vessels before arrival



Vessels must be properly cleared and accepted by REPSOL in accordance with the appropriate procedure

Vessels must be in good state of repair and all equipment properly functioning prior to proceeding to berth. Vessels must be presented in every respect ready to load product at temperature and pressure in accordance with notice. It will not be permitted to inert tanks while at berth without approval of Terminal Representative.

Vessels will not be acceptable for loading unless the tanks to be loaded and ship's piping are free of any liquid or vapour which would knowingly contaminate or degrade the product. Tanks must be accepted by the Independent Inspector of the cargo, and Terminal assumes no responsibility for their cleanliness.

Vessels must fit the physical configuration of the Jetty and must be able to receive product at normal loading rates, pressures and temperatures as for average vessels of similar size and service. Loading restrictions due to vessel condition or equipment will be accounted for and deducted from any demurrage claim

Vessels having emergency shutdown valves which slam shut instantaneously must lock valves open or adjust them to a reasonable closing rate to prevent excessive damaging surge pressures. Loading rates will be reduced to a safe calculated rate depending on ship's valve closure times.

Vessels of a different design as: chemical tankers, oil/bulk/ore or oil/ore type will only be accepted for loading if all the following relevant conditions are satisfied, in addition to complying with all other port/terminal regulations which may be in existence at the time.

Vessels must have capability to discharge dirty ballast ashore or must keep it on board segregated from ballast and cargo (with consequent reduction in cargo capacity).

Vessels must be fully manned. Vessels must follow the standard demanded by the ship's flag. Crew must be fully conversant with the change over procedures. Senior officers must be fully capacitated for ship and cargo handling.

Vessels must ensure that decks are fully clear of all previous dry cargo spillings. All oil loading and ballasting systems such pipework, valves, gauging system, inert gas systems, to have been properly tested. All tank accesses which may come under oil pressure to be proved tight. Any access not proved tight must not be put under pressure during loading at REPSOL Terminal.

3.2 Loading & discharging operations



Before berthing	Ship's agent must send the Repsol pre-arrival questionnaire to the Terminal. Repsol Terminal will not authorize any vessel to berth without the pre-arrival questionnaire, ISPS documents and Vetting acceptance.
	<p>Prepare following documents to be delivered to Loading Master upon berthing:</p> <ul style="list-style-type: none"> - Crew List, Ship's Particulars and Cargo lines last pressure test certificate. - Cargo documents for receivers, MSDS and Discharge Plan including Stress Plan (only discharge operations). - Loading Plan including Stress Plan (only loading operations).
	ETA must be updated 72, 48 and 24 hours before arrival.
Before commencing operations	Ship and shore representatives will agree on the conditions and limits of the operations, as well as the quantities to be loaded or discharged and who will be responsible for notifying the termination.
	Terminal Loading Master and the duty officer of the vessel will carry out the corresponding safety checks and sign the Safety Check List.
During operations	During the stay of the vessel at the Terminal the ship listen to VHF CH 10 permanently and by this means will communicate any incident which may affect the operations or facilities of the vessel or of the Terminal.
	When, for whatever reason the vessel stops the operations, it will immediately communicate by VHF CH 10.
	The vessel and the Terminal will inform one another prior to any change in the flow rate of loading or discharging.
	During operations the vessel and the Terminal will carry out checks on the Safety Checklist within agreed intervals.
End of operations	The vessel will advise the Terminal, on VHF channel 10, one hour before the end of any loading or discharging, and will communicate confirmation of this 15 minutes before the end.

INERT GAS

Any vessel which is going to load or discharge or carrying goods in transit with a flash-point less than 60°C (ASTM-D-93), must have its tanks inerted and keep them in that condition during the entire operation.

Empty tanks with flammable atmosphere must also be inerted.

Vessels operating with LPG or loading products with flash point equal to or lower than 50 °C, will **connect their vapour return line to the shore system** for purging inert atmosphere or to use in case of emergency.

The vessel must use its own means to maintain this inert condition. IG system must be always operative. Before berthing the vessel must confirm to the Terminal that IG plant is operative and must inform of any breakdown or anomaly in it.

Once the vessel has berthed it is not permitted to perform any atmosphere change operations to inert tanks.

Vessels which are operating with inert gas must inform the Terminal of any interruption of supply of inert gas to the tanks and the reason for it. They must also inform if the oxygen content in the tanks is more than 8%.

Products in transit having a flash-point below 60°C must be inerted. In any case all cargoes in transit should be informed to Repsol Vetting for prior acceptance.

CRUDE OIL WASHING (C.O.W.)

Before arrival

C.O.W. operations must be authorized by the Port Authority.

The Master must ask permission via Agent at least 24 hours before arrival.

Before operations

Written authorization will be granted by the Port Authority and a copy must be delivered by the Master of the vessel or the agent to the loading master before any washing can take place.

During operations

The vessel must fulfill all the prescriptions of the vessel's manual for C.O.W. and the recommendations of the IMO.

Surveyor, on behalf of Repsol, will check operations and will advise the vessel about the most suitable type of cleaning according to the characteristics of the crude.

TANK CLEANING

Tank cleaning, inerting & gas freeing operations are strictly forbidden while alongside Repsol Terminal facilities.

If the tanks need an additional wash, it must not be done while the vessel is berthed, and the vessel must leave the dock.

3.3 Berthing Maneuver



Repsol Terminal will notify the Authorities and ship's Agent of the Vessel's assigned berth.

Master will "always" follow the Pilot's instructions to proceed to the berth.

Electronic aids are available during berthing manoeuvre (distance and approach speed to berth).

Terminal is fitted with an oceanographic station.

Fenders are designed with a generous energy absorbing capacity at normal working stress levels.

Specifications of jetties for the approaching vessels.

Jetty Berth	Recommended max. velocity (cm./sec.)	Recommended max. angle to the jetty face
P.11	6	0° up to 7.5°
P.35	8	
P.80	10	

3.4 Safe Mooring



Masters of the Vessels are responsible for the following mooring practices:

Any known defect in the Vessel's mooring system or limitation of mooring winch brakes should be reported to the Pilot and to the Terminal before arrival in order that, if necessary, additional precautions may be agreed.

Ensure that their Vessels are properly secured alongside with adequate ropes or wires, and that all mooring equipment is in good condition.

Ensure that a strict watch is kept on their Vessel mooring system, and that they are tethered as required to prevent slack or overtight lines and undue movement of the Vessel.

Where wires are used they should be of a similar breaking load to that of ropes.

It is recommended that wires should be used for all mooring lines.

It is not recommended that synthetic ropes and wires be used leading in the same direction, to the same quick-release hook or bitt.

Ensure that the Vessel mooring ropes are fastened only to the proper fixtures provided for this purpose.

Springs should be as long as possible, and it is recommended that wires are used and secured to the mooring points of the jetty. In case of using bitts for fastening the wires ashore (instead of fast quick-release hooks), it is recommended to use wires fitted with synthetic fiber rope tails of at least 25% greater breaking load than the wire.

Provide full power or steam on deck to all mooring winches throughout the period vessels are alongside the jetty.

As soon as Vessel is positioned, positively secure the manual brakes on all mooring winches,. Winches must not be left on automatic tension mode.

Masters should ensure that mooring lines are in good condition. Winch brakes or securing devices should be in efficient operating order and should have a holding power of at least 60% of the breaking load of the Vessel's mooring lines. (On Vessels constructed before 1978 these conditions may be met by placing the winch in gear and applying power in addition to applying the brake).

Mooring lines must be adjusted under the supervision of a responsible officer.

An efficient watch must be maintained on deck throughout the Vessel's stay alongside.

The Terminal will require cargo operations to be ceased and/or tugs summoned, if the Vessel's movement will endanger the loading arms, or in absence of an alert and efficient deck watch ALL DELAYS/CHARGES caused by the ship's failure to observe the above precautions will be for the ship's account.

3.5 Stand-by procedures



While the Vessel is alongside her engines should be ready for leaving at any time on short notice. If for any reason the Vessel can't comply with these requirements our Terminal Representative must be advised immediately.

During the Vessel's stay at jetty adequate crew must remain on board under the continuous supervision of a responsible ship's officer to deal with any emergencies.

Crew members are not allowed to leave the Terminal on foot. There is a shuttle van to the main gate with 24-hour round trip service.

Any repairs that will prevent complying with the above requirements should not be undertaken without the approval of the Port Authority and the Terminal Representative.

Ship/Shore communication system must be maintained in the most efficient way.

Vessel's fire fighting equipment, including main and emergency fire pumps, shall be kept ready for immediate use, and a:

- Sufficient number of hoses on deck connected to fire line with nozzles ready for use.
- Dry chemical extinguishing equipment of adequate capacity, extinguishers must be located near the ship's manifold

The Terminal Representative should be instructed about the location of the Ship Emergency Shutdown System (E.S.D.). Communication between ship and shore at berth will be agreed with the Master.

The Vessel must give at least 15 minutes' advance notice when any pump is stopped or the loading/discharging rate changes.

During the Vessel's stay at Port, the Terminal Representative must be notified immediately of any emergency aboard.

Conditions to be observed during transfer operations

An adequate number of crew members must remain on board under the continuous supervision of a responsible ship's officer to deal with any emergencies.

During the loading/discharging operation all doors, portholes and openings leading from the main deck to accommodation or machinery spaces (other than pump room) shall be kept closed, and doors, portholes and openings at any deck level above the main deck which overlook that deck shall be kept closed.

All ventilation through which gas can enter shall be suitably trimmed and mechanical ventilation and air conditioning units shall be stopped if gas is being drawn into the system.

All cargo tank lids shall be kept closed and secured, the venting of the Vessel's tanks must take place only through the venting system.

If for any reason there is an accumulation of gas, loading shall be stopped

In addition to the foregoing, the following conditions must be observed in the loading operations of L P G Vessels:

- Master to advise the following
 1. Max. loading rate required
 2. Max. working temperature and pressure of ship's tanks.
 3. Previous three cargoes carried.
- Ships relief valves to be set at maximum working pressure.
- Ship's tanks to be purged of air to the satisfaction of the Terminal Representative prior to loading. Loading will not commence where oxygen content exceeds 2% by volume.
- VENTING/PURGING OF VAPOUR TO THE ATMOSPHERE WHILE ALONGSIDE IS NOT PERMITTED.
- Personnel to be aware of the danger of "frost burns".
- Cargo loading arms to be completely cleared of liquid and all pressure removed before disconnecting. Nitrogen is connected to the loading arms for purging prior to the removal of the arms.
- All automatic controls, gas detectors, gauges and temperature indicators to be in working order.
- Emergency control systems for closing of valves and stopping of pumps to be operating satisfactorily.
- Due account should be taken of the high coefficient of volumetric expansion when determining closing ullages.
- All vapour must be recycled and not permitted to be released to atmosphere.
- At least two independent methods of determining ullage space to be provided.

All Vessels alongside must be maintained in a state of readiness for vacating a berth at short notice, except in cases of approved repair work.

3.6 Fire emergency instructions



Fire Fighting Equipment	The vessel's fire fighting system must remain under pressure during all operations. The vessel will place two hoses, one forward and one aft of the manifold connected to the fire mains and have at least two, preferably dry powder, portable extinguishers ready.
	The International ship/shore connection must be ready for use in case of emergency. A connection is available in all shore platforms/berths.
Fire Ashore Or Onboard Other Vessel	Terminal fire alarm signal is: Continuous blows of whistle.
	Vessel will immediately be advised of the fire location.
	All operations must be stopped immediately. The Vessel must be ready to leave the Terminal.
	The Vessel while waiting for instructions (which will be communicated by the Terminal Representative) must prepare loading arms for disconnection.
Fire onboard Vessel	The Vessel shall sound the fire alarm signals with the whistle blowing seven short blasts, accompanied by a continuous sounding of bell.
	All operations must be stopped immediately and the Vessel must be prepared to leave the Terminal.
	Vessel's Master will determine the action to be taken by the Vessel's crew, and will keep the Jetty Operator advised of these actions. Jetty Operator will pressurize the jetty fire fighting system and direct the monitors if so required, or will obtain further support for the Vessel as needed.
	Vessel should be continuously in touch with terminal representative and will follow his instructions. Ship must leave the Terminal if becomes necessary.

IN CASE OF FIRE DO NOT HESITATE TO RAISE THE ALARM

Terminal Fire Alarm:	Continuous blasts of Terminal's siren.
Ship fire alarm when alongside Terminal Jetty	<ul style="list-style-type: none"> Five short blast of the ship's whistle; supplemented by a continuous sounding of the general alarm system. Contact Terminal: VHF: 10

**TERMINAL WILL DIRECT MOVEMENT OF VEHICULAR TRAFFIC ASHORE.
SHIPS READY TO MOVE UNDER OWN MEANS TO PROCEED TO ANCHOR**

ACTION – SHIP	ACTION – TERMINAL
Fire on your ship	Fire on a ship
Raise the alarm	Raise the alarm
Call Tarragona Port Control VHF: 13/16 Phone: 900 22 99 00	Call Tarragona Port Control VHF: 13/16 Phone: 900 22 99 00
Fight fire and prevent fire spreading	Contact Ship
Inform Terminal	Cease all cargo / ballast operations and close valves
Cease all cargo / ballast operations and close valves	Stand-by to disconnect hoses or arms
Stand-by to disconnect hoses or arms	Stand-by to assist fire fighting
Bring engine to stand-by	Inform all ships
-	Implement Terminal Emergency Plan
Fire on another ship or ashore.	Fire ashore
Stand-by and, when instructed:	Raise the alarm
Cease all cargo / ballast operations and close valves	Cease all cargo / ballast operations and close valves
Disconnect hoses or arms	Fight fire and prevent fire spreading
Bring engines and crew to stand-by, ready to unberth	If required, stand-by to disconnect hoses or arms
Watch VHF channel # 16/10 for instructions.	Inform all ships
-	Implement Terminal Emergency Plan

3.7 Oil pollution prevention



Pollution check list will be completed by all Vessels handling crude oil, products or bunkers.

No petroleum or ballast water containing petroleum shall be discharged or allowed to escape from any Vessel into the sea. All loading arms must be drained before being disconnected. Drip tray shall be placed under flanged connections if spill tank not fitted, on ship's manifolds to collect any drips or spillage.

During operations, all scuppers of Vessels shall be effectively plugged, and no leakage or spillage on board shall be swept or allowed to leak overboard. **ANY LEAKAGE OR SPILLAGE must be reported to the Terminal Operator.** The Terminal Operator will immediately take emergency action as necessary and notify the Terminal Supervisor.

All ballast water containing petroleum shall be discharged to the Terminal tanks (previous authorisation by Terminal representative).

Bilge water must not be pumped overboard during your Vessel's stay at port.

In all cases, included if "shore stop" is agreed, Vessel will be responsible from blame and clean up expense if ship cargo or bunker tanks overflow

When "topping off", ensure that the valves of the next tank to be filled are cracked open in good time.

Always ensure that the valves of a shut off tank are not leaking. Inspect the ullage of the "shut off" tank, shortly after the valve has been closed. When topping off the final tank, make sure that the loading rate is eased down and the shore personnel are standing by to shut off.

All flanged joints required to connect loading arms to a Vessel e.g. reducing pieces/spools, shall contain "full bolting" using the largest bolts possible to fit the flange holes.

Loading/discharging of Vessels will not commence until loading arms have been properly inspected by the Terminal Representative.

No hot or hazardous material, or any other objectionable material, solid or fuel, shall be thrown overboard from any Vessel.

All overboard discharge/sea valves part of, or connected to the cargo oil system, shall be blinded, shut, lashed and sealed during the loading/discharge, bunker or deballasting operations.