CONTENTS

Conceptual Version 5

1. Introduction

OCIMF's Marine Terminal Particulars Questionnaire (MTPQ) has been developed with the aim of providing a standard format for the collection of information on a terminal's arrangements and facilities that can be shared with terminal users and other interests.

The information contained in the MTPQ is intended to complement that already available on the physical layout and technical capabilities of tankers and gas carriers within OCIMF's Ship Inspection Report (SIRE) system. By accessing both the MTPQ and SIRE data, vessel programmers, schedulers and operators will be better placed to match vessels to terminals with the aim of enhancing the safety and efficiency of operations. Furthermore, the availability of a universally-accepted format for capturing standard terminal information will be of assistance to individual terminals when responding to information requests from interests that may include potential users, shipping agents and local authorities.

Terminal operators are encouraged to complete the MTPQ to the fullest extent possible and to maintain the information up-to-date by submitting revised data as necessary. In completing the questionnaire, terminal operators may have to seek confirmation from other sources, such as port and pilotage authorities, to ensure the accuracy of the information. The MTPQ has been designed so that drop down options for help, guidance and a glossary has been provided to help standardize the information being collected.

The person completing the MTPQ should furnish an explanation supporting the reason why a specific numeric data field has been left un-populated (empty of data).
Such explanations should be entered into the narrative field in the 'Additional comments or information' Question at the end of the relevant question set in the MTPQ. This will verify that the data field had been left un-populated for a valid reason rather than just neglected.

i.e. If Parallel Body Length criteria do not apply for the berth in question, the explanation for leaving the Minimum Parallel Body Length (PBL) data fields un-populated could be 'berth is continuous concrete quayside, PBL limitations do not apply.

Terminal information will be stored in an electronic database managed by OCIMF and available to OCIMF members and defined third parties. The information on a particular terminal will be available to the terminal in a format that will be suited for onward transmission and inclusion, for example, in terminal information booklets.

Provision of accurate and comprehensive terminal information is an essential element in ensuring the compatibility of ships and terminals, the safety of operations and the protection of the environment.
Users are encouraged to provide feedback to OCIMF so that improvements to questionnaire can be made in the future.

Consensual Version 5

3. Glossary

Absolute maximum draught	Where maximum draft or under keel clearance is defined by formula, an "absolute maximum draft" limit may be expressed in linear measure. E.g. "Under keel clearance of 10% summer draft must be maintained at all times and draft should not exceed 9.2m"
Air draft	The vertical distance measured from the waterline to highest point of a vessel.
Anchorage	A place suitable for anchoring in relation to the wind, seas and seabed
ANSI	American National Standards Institute. In the context of guidance to Q7.1 "ANSI 150" defines a standard to which a flange is manufactured.
Aramid	Aramid fibres are a class of heat-resistant and strong synthetic fibres used in rope production.
BCM	Distance bow to centre of manifold.
Beam	The maximum width of a vessel.
Berth target point	Reference point on a jetty or quayside from which measurements are taken and for lining up vessels in correct position when alongside a terminal.
Berth user	Any commercial or non-commercial entity which imports cargo from or exports cargo to ships at the berth.
Berthing aids	Instrumentation used to provide visual indication to vessels' captains and pilots when approaching the berth of key manoeuvring data such as distance from berth and speed of approach.
Break rendering load	The load under which a winch brake is set to render. Winch brakes will normally be designed to hold 80% of the line's MBL and will be set in service to render at 60% of the mooring line's MBL. Brake holding capacity may be expressed either in tonnes or as a percentage of a line's MBL.
Breastlines	Mooring lines leading ashore as nearly perpendicular to the ships fore and aft line as practicable
Bunkers	Fuel Oil and Gas Oil used to fuel the ships main propulsion and auxiliary engines.
CALM	Catenary Anchor Leg Mooring. Describes a system of securing a single point mooring using chains to a number (typically 6 or 8) of evenly spaced anchor piles equidistant from the buoy centre.
Chain stopper	A mechanical device for securing chafe chains onboard a tanker.
Chart Datum	Reference level from which all heights and depths are measured.
Controlling depth	The minimum depth, expressed in reference to Chart Datum, in a navigational passage. This does not include shoals which are identified and can be reasonably and safely avoided.

Consultation Version 5

Double banking, double banked	Mooring one vessel to the offshore side of another vessel moored alongside a jetty or quayside; Moored to the offshore side of another vessel moored alongside a jetty or quayside
Draft (Draught)	Depth of keel below waterline
Engineering (mooring & fendering) analysis	Formal methodology by which the adequacy of fendering and mooring arrangement of a berth is assessed for all applicable vessel sizes.
Fairlead	A guide for a mooring line which enables the line to be passed through a ships bulwark or other barrier without snagging or fouling.
Fender reaction	The reaction force exerted on the vessel's hull when compressing a fender during berthing operations.
Fender-line	An imaginary line parallel to face of berth or quay which touches the seaward face of the fenders.
Fender	A unit, usually of compressible material, fitted to quayside or jetty face to absorb the loads applied to jetty and vessel during berthing and whilst moored alongside thus avoiding damage to either structure.
Freeboard	The vertical distance measured from waterline to the freeboard deck, normally the uppermost continuous deck or maindeck.
Gantry suspended hose	Loading or discharge hoses at a terminal suspended from a shore gantry structure for ease of connection or retrieval.
Garbage reception facilities	Facilities at a port or terminal for the purpose of landing garbage from vessels.
H_2S	Hydrogen Sulphide
Headlines	Mooring lines leading forward from the bow of a ship, often at an angle of about 45 degrees to the ship's fore and aft line.
High modulus polyethylene (HMPE)	High Modulus Polyethylene. A manufactured fibre based on ultra High Molecular Weight Polyethylene (UHMWPE)
High modulus synthetic moorings	see HMPE.
Ice class notation	Classification Society certification of vessels designed to operate in ice conditions.
Ice navigator, ice advisor	Qualified individual who has completed approved training in ice navigation.
IMO	International Maritime Organisation.
IMO number	Unique identification number assigned to a vessel by the International Maritime Organisation.

Conceptual Version 5

Insulation flange	A flanged joint incorporating an insulating gasket, sleeves and washers to prevent electrical continuity between ship and shore.
ISGOTT	International Safety Guide for Oil Tankers and Terminals
ISPS Code	International Ship and Port Facility Security Code
Jetty	A structure, protruding from the shore and incorporating a supported platform to which ships may dock. (as differentiated from a wharf or quay - see below)
Kanal Peil, Kanaal Peil	The datum level of a particular canal referenced to the National Datum (e.g. Normaal Amsterdam Peil) and used for ease of calculation, on that canal, of related heights and depths.
Length overall (LOA)	The extreme length of a vessel.
Liquid crystal polymer	A class of aromatic polyester polymers which are extremely unreactive and highly resistant to fire, from which high modulus ropes are manufactured
Loading arm	A device consisting of articulated steel pipes that connect an oil tanker, chemical tanker or liquid carrier to a cargo terminal. Also known as a mechanical loading arm, or MLA.
Lowest Astronomical Tide	The lowest tidal level which can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions.
Manifold	Pipeline terminations on a vessel to which loading or discharging lines can be connected from shore to enable liquid cargo to be transferred.
Manifold Height	The vertical distance measured from the deck or waterline to the geometric centre of a manifold connection.
Marine Terminal Baseline Criteria and Assessment	The Marine Terminal Baseline Criteria and Assessment Questionnaire is published by the Oil Companies International Marine Forum (OCIMF) to encourage the uniform assessment of standards of safety and environmental protection at chemical, gas, and oil terminals.
Mean Low Water	The average of all low waters heights over a year.
Mean Low Water Springs	The average of the lowest levels to which spring tides retreat over a period of time.
Mean Lowest Low Water	The height of the mean of the lower of the two daily low waters over a long period.
Mean Sea Level	The average height above chart datum of the surface of the sea at a tide station for all stages of tide over a 19 year period.

Consultative Version 5

Mercaptan	A group of naturally occurring, sulphur containing, organic chemicals, present in some crude oils, condensates and gasoline cargoes. They have a strong odour and are sometimes used to give LPG cargoes their distinctive smell. Initial effects on people are similar to those of Hydrogen Sulphide.
Messenger	A small diameter rope, typically up to 40mm, used to heave the end of a heavier line such as a mooring rope to a securing point such as a shore hook or ship's bollard.
Minimum breaking load	The minimum load at which a rope or wire breaks when tested to destruction.
Minimum vertical clearance	The smallest vertical distance measured from Highest Astronomical Tide or similar datum to the underside of a bridge, span or overhead cable
Mooring craft	Small craft used to assist in transferring mooring lines from vessel to shore during berthing.
Mooring equipment guidelines	Guidelines produced by the Oil Companies International Marine Forum the number size and operating parameters of mooring equipment fitted to ships.
Mooring tails	A length of synthetic rope fitted between end of mooring lines and shore to provide increased elasticity to the mooring arrangements thus reducing dynamic loads on mooring lines.
MPM	Multi Point Mooring
National Geodetic Vertical Datum	The vertical control datum established in 1929 for surveying in the United States of America. It has since been replaced by the North American Vertical Datum of 1988 (NAVD 88)
Negative tidal surge	The reduction in predicted tidal height due to abnormal weather conditions.
Normaal Amsterdam Peil	Also known as "Amsterdam Ordnance Datum" is a vertical datum in use in large parts of Western Europe.
Normal ballast condition	Designed ballast condition for vessel in normal weather conditions.
Over-the-tide operations	A procedure which utilises tidal changes in water depth to either finish loading of a ship to its full draft as the water depth increases toward high tide, or to discharge cargo to lighten a ship before a low tide level is reached, thus maintaining the vessel "always afloat"
Parallel body length	Measurement at waterline of the flat side of vessel.
PERC	Powered emergency release couplings.
Pilotage	Passage from open sea to terminal or berth where ships' crews are assisted by a local pilot to ensure safety of navigation.
PLEM	Pipe Line End Manifold
Port Authority	Organisation which has management authority and control of a port.
Port Facility Security Officer	Nominated person responsible for terminal's compliance with ISPS code.

Consultation Version

Presentation flange	Outermost flange at ships manifold to which shore lines are connected.
PV valve	Pressure/vacuum relief valve. A device which provides for the flow of the small volumes of vapour, air or inert gas mixtures caused by thermal variations in a cargo tank.
Quay	A wharf, or quay, is a solid structure on the shore of a harbour where ships may dock to load and unload cargo or passengers.
Roll	The dynamic side to side movement about the centreline of a vessel due to external forces.
SBM	Single Buoy Mooring
SCM	Horizontal distance measured from the stern to the centre of manifold.
Sea island	A pier or structure with no direct connection to the shore at which tankers can berth.
Shore mooring	Mooring line lead from the shore to a vessel to supplement the mooring lines of a vessel.
Slop reception facility	Facility at a port or terminal designed to receive and process slops from vessels.
Slops	Residue on board a vessel resulting from the cleaning and draining of ships cargo tanks.
SOLAS	The International Convention for the Safety of Life at Sea, as amended from time to time.
SPM	Single Point Mooring
Springs	Mooring lines leading in a nearly fore and aft direction for the purpose of maintaining the longitudinal position of a ship whilst in a berth. Forward springs lead aft from the ship to prevent forward motion and aft springs lead forward to prevent movement astern.
Static under keel clearance	Least vertical distance measured from the sea bed to the ship's keel when vessel stopped in the water.
Sternlines	Mooring lines leading aft from the stern of a ship, often at an angle of about 45 degrees to the ship's fore and aft line.
Structural Survey	Detailed physical survey of an object to ensure it's structural strength and integrity against design criteria.
Summer Deadweight	The carrying capacity of a ship including cargo, bunkers and stores, in metric tonnes when loaded to summer draft.
Surge	Movement of a vessel in the fore and aft line alongside a jetty or quayside.
Swamped mooring	Mooring line lead from a submerged point to a vessel to supplement the mooring lines of a vessel.
SWL	Safe Working Load. Generally a load less than the yield or failure load by a safety factor defined by a code, standard or good engineering practice.
Terminal	A place where tankers are berthed or moored for the purpose of loading or discharging petroleum cargo.

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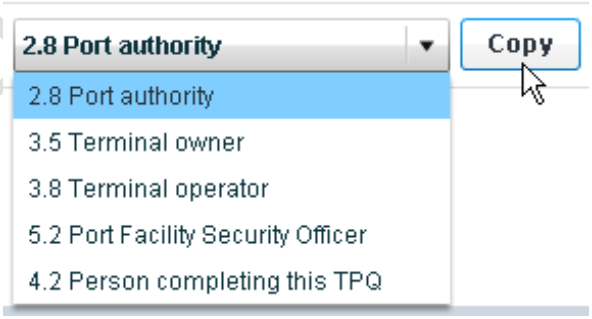
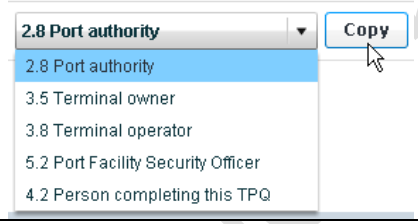
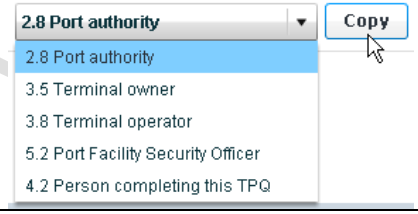
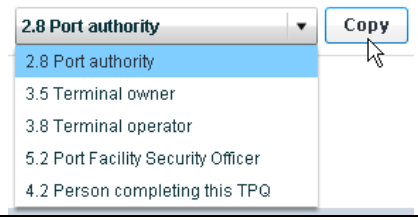
Terrestrial coordinates	The numeric definition of a position on the Earth's surface, expressed in degrees, minutes and seconds (or degrees, minutes and decimals of a minute) of Latitude (N or S) and Longitude (E or W). Although for some applications national grid references may be used to define position, for the purposes of this questionnaire, Latitude and Longitude are used throughout.
Throughput rate (vapour)	Volume of vapour passing through a pipe or system in a selected time period. Usually measured in m^3/hour.
Tidal Range	Difference in height of tide between low water and high water
Transfer arms	A device consisting of articulated steel pipes that connect an oil tanker, chemical tanker or liquid carrier to a cargo terminal. Also known as a mechanical loading arm, or MLA.
Transfer rate	Rate at which a cargo is moved from one location to another. Usually measured in m^3/hour.
UN Country Code	Unique two letter identifier assigned to each country by the United Nations.
UN Locode	Unique two letter identifier assigned to each trade and transport location by the United Nations.
Under keel clearance	Least vertical distance measured from the sea bed to the ship's keel.
Vapour manifold	Manifold connected to the ship's vapour or inert gas system, which on oil tankers is designed to avoid inadvertent connection to liquid cargo lines.
VHF / UHF	Very High Frequency/ Ultra High Frequency radio equipment
Waiting anchorage	Designated anchorage area for vessels awaiting berthing. If more than one anchorage is available the "normal waiting anchorage" for that terminal.
Wharf	A wharf, or quay, is a solid structure on the shore of a harbour where ships may dock to load and unload cargo or passengers.
Winterisation	Preparation or equipping of a ship for operating in severe winter weather or ice conditions.

Conceptual Version 5

4. Technical/Marine Guidelines for Terminal and Berth Particulars

No	Data Item	Guidance Notes / *Information*
1	Terminal Details	General
1.1	Date This TPQ document was completed/updated.	
1.2	Specify Units Used	State whether Metres and Metric Tonnes or Feet and Long Tons.
2	Terminal Details	Port Details
2.1	Port Name	*Predictive Text Facility provided*
2.2	UNLOCODE	Click **here** for details of the UN Locode system. *Links to: http://www.unece.org/cefact/locode/ for details of the UN Locode system.*
2.3	Country	*Predictive Text Facility provided*
2.4	Latitude and Longitude of Port	In degrees, minutes and seconds
2.5	Is this location affected by ice ?	If 'Yes', Berth section 15 to be completed
2.6	Name of port authority	
2.7	Port authority contact name and title	
2.8	Port authority full style contact address	*Facility provided to copy "Full Style Contact Address" details from other entities as shown below:* 
3	Terminal Details	Terminal Details
3.1	Terminal Name	
3.2	Terminal owner	
3.3	Name of first point of contact for terminal owner	

Conceptual Version 5

No	Data Item	Guidance Notes / *Information*
3.4	Terminal owner full style contact address	*Facility provided to copy "Full Style Contact Address" details from other entities as shown below:* 
3.5	Terminal operator, if different from owner	
3.6	Name of first point of contact for terminal operator	
3.7	Terminal operator full style contact address	*Facility provided to copy "Full Style Contact Address" details from other entities as shown below:* 
4	Terminal Details	TPQ Accountability
4.1	Name and title of person completing this TPQ	
4.2	Full style contact details of person completing this TPQ	
5	Terminal Details	PFSO Details
5.1	Does the port facility comply with the ISPS code ?	
5.2	Port Facility Security Officer full style contact details.	*Facility provided to copy "Full Style Contact Address" details from other entities as shown below:* 

Conceptual Version 5

No	Data Item	Guidance Notes / *Information*
6	Terminal Details	Operational Integrity Details
6.1	State details of any pre-arrival/operational clearance formalities for vessels	e.g. Pre-mooring inspections, terminal safety inspection
6.2	Has the terminal completed an assessment using the standard industry process ?	e.g OCIMF Marine Terminal Baseline Criteria and or Marine Terminal Management & Self Assessment
6.3	Additional comments or information	
7	Berth Details	Berth General
7.1	Berth name or number	
7.2	Berth type	*Drop Down Box with following options:* *i) Jetty* *a) 'T' Jetty* *b) Finger Jetty* *ii) Wharf or Quay* *iii) Sea Island* *iv) Multi Buoy Moorings (MBM)* *v) Conventional Buoy Moorings (CBM)* *vi) Single Point Moorings (SPM)* *vii) Single Buoy Moorings (SBM)* *viii) Anchorage* *ix) Other (specify)*
7.3	Terrestrial co-ordinates of manifold centerline, MBM, PLEM or SBM	State Latitude and Longitude in degrees, minutes and seconds for the following berth types: i) Jetties, wharves and sea islands - the terrestrial co-ordinates should refer to the 'Berth Target Point', which is the exact location where the berth cargo connection Centreline intersects with the berth's fender-line. See Fig.3 - Berth Plan. ii) Multi Buoy Moorings (MBMs) and Conventional Buoy Moorings (CBMs) - the terrestrial co-ordinates should refer to the exact position of the 'Pipeline End Manifold' (PLEM) on the seabed. iii) Single Point Moorings (SPMs) and Single Buoy Moorings (SBMs) - the terrestrial co-ordinates should refer to the geometrical centre of the 'Cantenary Anchor Leg Mooring' system connecting the SPM or SBM to the sea bed. **Diagram C**

Confidential Version 5

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
7.4	Berth users for liquid and gas cargoes	State name of those parties using the berth for the transfer of liquid and gas cargoes. Such parties may include those named as 'owner' and 'operator' included in q3 of this TPQ.
7.5	Has a structural survey of the berth been undertaken, including its underwater structure ?	Structural survey of the berth should be conducted in accordance with current OCIMF Guidelines.
7.6	Has an engineering (mooring and fendering) analysis of berth been undertaken?	Engineering (mooring & fendering) analysis for the berth should be conducted in accordance with current OCIMF Guidelines.
7.7	Additional comments or information	
8	Berth Details	Berth Approaches
8.1	Is pilotage compulsory	If Yes, state if any vessels are exempted.
8.2	State distance from pilot station to berth	If more than one pilot station exists, provide distances from each to berth.
8.3	Is a waiting anchorage available ?	If answer is 'Yes', state distance from normal 'petroleum' anchorage to berth.
8.4	Controlling depth of water for transit to and from berth	State datum used if not chart datum. Ideally the datum should correspond to the local zero datum used to baseline tidal predictions, river stage forecasts or temporary water level variation due to prevailing meteorological conditions. *Datum levels included in Drop Down Box:* *Chart Datum [CD]* *Lowest Astronomical Tide [LAT]* *Mean Low Water Springs [MLWS]* *Mean Lower Low Water [MLLW}* *Mean Low Water [MLW}* *Mean Sea Level [MSL or Zo]* *Normaal Amsterdam Peil [NAP]* *National Geodetic Vertical Datum [NGVD]* *Mean High Water {MHW}* *Mean Higher High Water {MHHW}* *Mean High Water Springs {MHWS}* *Kanal Peil [KP]* *Other (specify)*
8.5	Date of latest survey from which foregoing depth has been determined	Date of obtaining official soundings from hydrographic/bathymetric survey.
8.6	Date next survey is due	

Consultation Version 5

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
8.7	State Maximum Tidal Range in berth approaches	
8.8	Is laden transit to and/or from the berth conducted using the tide?	f 'Yes', state optimum transit window (i.e. at High Water, HW +/- 1 hr)
8.9	State Details of any specific berthing and/or unberthing restrictions	e.g. no night time berthing permitted; unberthing at night permitted, tidal restrictions, weather restrictions.
8.10	Minimum under keel clearance in berth approaches	It is conceivable that at some locations the required UKC criterion may be conditional upon a number of parameters. An example may be that it is required that the minimum UKC shall not be less than the greater of 1.5% of the breadth of the ship and 20 centimetres. In this event the 20 centimetres UKC criterion would be recorded as value and 1.5 would be recorded as a Percentage with the 'Breadth' option selected from the Percentage data entry drop down selector. There may be a further UKC criterion that applies for the same location, such as more stringent UKC applies for : • larger vessels (i.e ships' > 50,000 Tonnes dwt), • extreme tidal ranges (If Tidal Range is more than 4.0 metres) • specified seasons (Winter Season April-September), • specified environmental conditions (Swell > 1.5 mtrs Significant) Or, alternatively: less stringent UKC applies for: • smaller vessels (i.e. ships' < 20,000 Tonnes dwt), • less extreme tidal ranges (If Tidal Range is less than 2.0 metres) • specified seasons (Summer Season October-March), • specified environmental conditions (Swell < 0.5 mtrs Significant) Any additional UKC Criterion of such a nature should be recorded in the 'Specify other UKC criterion where applicable' Data input field. **Diagrams E & F**

Conceptual Version 5

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
8.11	Absolute maximum draught in berth approaches, if applicable	Absolute maximum, irrespective of tidal level, if relevant.
8.12	State minimum vertical clearance of any bridges/power cables/vertical obstructions	This value should correspond to the height of any underside of bridge or power-lines spanning the transit route to or from berth. *Datum levels included in Drop Down Box:* *Chart Datum [CD]* *Lowest Astronomical Tide [LAT]* *Mean Low Water Springs [MLWS]* *Mean Lower Low Water [MLLW}* *Mean Low Water [MLW}* *Mean Sea Level [MSL or Zo]* *Normaal Amsterdam Peil [NAP]* *National Geodetic Vertical Datum [NGVD]* *Mean High Water {MHW}* *Mean Higher High Water {MHHW}* *Mean High Water Springs {MHWS}* *Kanal Peil [KP]* *Other (specify* **Diagram H**
8.13	Does the port require tankers and gas carriers to be escorted by tugs?	If 'Yes', state whether Active or Passive escort is employed and the maximum towline force that the tug is able to generate.
8.14	Additional comments or information	Included comments or information may include details regarding any seasonal variations with regard to the maximum transit draught if applicable.
9	Berth Details	**Water Depth Alongside**
9.1	Minimum controlled water depth alongside	*Datum levels included in Drop Down Box:* *Chart Datum [CD]* *Lowest Astronomical Tide [LAT]* *Mean Low Water Springs [MLWS]* *Mean Lower Low Water [MLLW}* *Mean Low Water [MLW}* *Mean Sea Level [MSL or Zo]* *Normaal Amsterdam Peil [NAP]* *National Geodetic Vertical Datum [NGVD]* *Mean High Water {MHW}* *Mean Higher High Water {MHHW}* *Mean High Water Springs {MHWS}* *Kanal Peil [KP]* *Other (specify)*

Concept Version 5

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
9.2	Date of latest survey from which foregoing depth has been determined	Date of obtaining official soundings from hydrographic/bathymetric survey.
9.3	Date next survey is due	
9.4	Minimum static under keel clearance alongside berth	It is conceivable that at some locations the required UKC criterion may be conditional upon a number of parameters. An example may be that it is required that the minimum UKC shall not be less than the greater of 1.5% of the breadth of the ship and 20 centimetres. In this event the 20 centimetres UKC criterion would be recorded as value and 1.5 would be recorded as a Percentage with the 'Breadth' option selected from the Percentage data entry drop down selector. There may be a further UKC criterion that applies for the same location, such as more stringent UKC applies for : • larger vessels (i.e ships' > 50,000 Tonnes dwt), • extreme tidal ranges (If Tidal Range is more than 4.0 metres) • specified seasons (Winter Season April-September), • specified environmental conditions (Swell > 1.5 mtrs Significant) Or, alternatively: less stringent UKC applies for: • smaller vessels (i.e. ships' < 20,000 Tonnes dwt), • less extreme tidal ranges (If Tidal Range is less than 2.0 metres) • specified seasons (Summer Season October-March), • specified environmental conditions (Swell < 0.5 mtrs Significant) Any additional UKC Criterion of such a nature should be recorded in the 'Specify other UKC criterion where applicable' Data input field. **Diagrams E & F**
9.5	State range of water densities at berth	Range e.g. '1015 to 1025' kg/m³
9.6	Type of bottom alongside berth	*Drop down box options:* *Sand, mud, clay, shingle, rock, other (specify)*

Conceptual Version 5

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
9.7	Absolute maximum draft alongside, if applicable	Maximum draft at any time, if relevant.
9.8	State maximum tidal range at berth, if applicable	
9.9	Are 'over-the-tide' cargo handling operations permitted at the berth ?	Refer to ISGOTT for Guidance
9.10	Does the berth location experience water-level anomalies?	The description 'water-level anomalies' refers to those occasions when the water level at a specific location may be lower than: 1. The datum used to determine the controlling depth of water; or 2. The Height of Tide or River Stage as predicted for a specific time and date at the berth location in question Such anomalies can occur under the following circumstances: • When the datum used to determine controlling depths is higher than the lowest water level that can occur at a specific location. At locations where the water level is affected by tidal variation, this will result in what is often referred to as 'negative tides'. i.e. for locations where Mean Low Water (MLW) is used as Datum approximately 50% of all tides will fall to or below such datum. • When the location is situated up a river where the water level or 'River Stage' is predominantly affected by the volume of water entering the river from surrounding 'catchment' terrain. River Stage can be reduced for instance when source water in higher terrain freezes in winter or when precipitation is reduced during a period of drought. • When water level is reduced due to a 'negative surge'. Such surges may occur at locations situated in a bight or area of enclosed body of water when strong winds blow the water away from the area. • When water level is reduced due to prevailing high barometric pressure. • When the prevailing wind and barometric conditions act together, the reduction in water level in an enclosed body of water can be very significant. If the berth location is known to experience water level anomalies such as those described above, answer 'Yes' and provide details in the 'Additional comments or information' question concluding this Section of the TPQ.

Conceptual Version 5

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
9.11	Additional comments or information	Included comments or information may include details regarding any seasonal variations with regard to the maximum draught alongside if applicable.
10	Berth Details	**Limiting Vessel Dimensions**
10.1	Summer Deadweight	Usually these values refer to the summer deadweight value corresponding to a vessel's 'scantling' Summer Load-line.
10.2	Berthing Displacement	Usually these values correspond to the actual 'all up weight' of the vessel whilst coming alongside the berth. The values correlate to the maximum and minimum permissible berthing energies allowed for in the berth's design fender reaction curves.
10.3	Alongside Displacement	Usually these values correspond to the actual 'all up weight' of the vessel at any time while berthed The value may correlate to the maximum permissible allowed for in the berth's fender reaction curves as designed, under the assumption that as some stage while alongside the vessel may have sufficient freedom of movement to 'sway' away from the and towards the fender panels when alongside the berth, thereby triggering a fender reaction.
10.4	State any deadweight/displacement exceptions	If the descriptions outlined in the guidance notes for determining deadweight and/or displacement values do not correspond with that implemented locally, describe locally applied interpretation. With reference to deadweight criteria advise whether deadweight values based upon re-measured Load-lines are acceptable for berth.
10.5	Cubic Capacity (gas carriers)	This question relates to the volumetric capacity of gas carriers. The limitations will be dependant upon the volumetric gas handling capacity of the terminal.
10.6	Length over all (LOA)	**Diagram G**
10.7	Beam	**Diagrams G & H**
10.8	Minimum Parallel Body Length (PBL)	The PBL values are required to ensure that the vessel's Parallel Body Length will make full width contact with the fenders when in position with the cargo connections made. **Diagram G**
10.9	Minimum PBL forward of manifold	The PBL values are required to ensure that the vessel's Parallel Body Length will make full width contact with the fenders when in position with the cargo connections made. **Diagram G**
10.10	Minimum PBL aft of manifold	The PBL values are required to ensure that the vessel's Parallel Body Length will make full width contact with the fenders when in position with the cargo connections made. **Diagram G**
10.11	Bow to Manifold Distance	In some cases the BCM and SCM values may be affected by occupancy or otherwise of berths ahead or astern of berth in question. If such is the case, elaborate in 'Additional comments or information' for this section. **Diagram G**

Consultation Version 5

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
10.12	Stern To Manifold Distance	In some cases the BCM and SCM values may be affected by occupancy or otherwise of berths ahead or astern of berth in question. If such is the case, elaborate in 'Additional comments or information' for this section. **Diagram G**
10.13	Freeboard	**Diagram H**
10.14	Manifold Height above water	For locations exposed to variation of water level due to tide or river stage, specify which water level datum should be used to determine heights above in the 'Additional Comments and Information' for this section. **Diagram H**
10.15	Manifold to shipside rail distance	If this distance is subject to various ship size or individual loading arm constraints, elaborate in 'Additional comments or information' for this section. **Diagram N**
10.16	Height above manifold above deck or drip tray	Specify whether the height is from the deck or the drip tray. **Diagram N**
10.17	Manifold spacing	**Diagram N**
10.18	Maximum Air Draft alongside	This value should correspond to the height of any obstructions impacting on the berth i.e bulk loading gantry. The datum level used to determine air draft in should be specified in the 'Adittional Comments and Information' for this section. **Diagram H**
10.19	Vessel's Minimum Derrick/Crane Safe Working Load (SWL)	
10.20	Additional Comments of Information	
11	Berth Details	**Mooring and Berthing Information**
11.1	State availability and specifications of tugs and mooring craft required for berthing and/or unberthing	Provide the names, lengths and power and/or bollard pull of each tug available for berthing unberthing at the terminal. In addition, outline port and/or terminal regulations in respect of the minimum requirements for tugs during berthing and unberthing. If these requirements are dependent on the vessel type or size, please tabulate the requirements for all vessel types and sizes handled at the terminal. State the number of mooring craft available and method of propulsion.
11.2	Are ship's or tug's lines used?	*Drop Down Box Options: Ship's Lines; Tug's Lines; Not Required* State whether towage lines are provided by the tugs or ship's ropes are required to be used for towage. If ship's lines are required indicate whether one or two lines are sent to each tug.

Conceptual Version 1

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
11.3	Type of fenders installed at berth	*Drop Down Box Options: Cone Type; Cell Type; Leg Type; cell Type; Arch Type;Hollow Profile Type; Ryakin Fender; Pneumatic Floating Fender; Foam Filled Floating Fender; Tyre Fenders; Wooden Piles or Wooden Panel Fenders; Panel Fenders; Other {Specify}* Select the type of fendering fitted or that which most closely resembles the fendering fitted from the drop down list. **Diagram L**
11.4	State orientation of vessel in berth	*Drop Down Box Options: Port Side to; Starboard Side to; Either Port & Starboard Side to; Stern First; Not Applicable*
11.5	At buoy moorings, state which side hose is normally connected	*Drop Down Box Options: Port; Starboard; Not Applicable; Other {Specify}* If hose is connected at ship's bow, provide specifications of required hose coupling.
11.6	Minimum Mooring Arrangement	Indicate the minimum requirements for mooring at the berth. Where these requirements change with vessel type or size, please include all vessel types or sizes capable of being accommodated at the berth. Please state minimum requirements in terms of number of ropes (identifying headlines, sternlines, breastlines or springs if appropriate) minimum breaking load or SWL, minimum length and minimum diameter as applicable. **Diagram M**
11.7	State any additional mooring requirements	Include any berth-specific additional requirements such as the following: • Use of vessel's anchors • Mediterranean Mooring • Baltic mooring • Brake rendering load adjustment • Specific requirement for non-standard mooring tails
11.8	Are there any restrictions using wire mooring ropes ?	If 'Yes; provide details of restrictions in wire moorings as part of the mooring pattern. Where wires are acceptable only as part of the overall mooring pattern, please answer "Yes" to this question and explain (e.g. "Wires acceptable as springs only")
11.9	Are there any restrictions using synthetic mooring ropes ?	If 'Yes; provide details of restrictions in synthetic moorings ropes as part of the mooring pattern. Where synthetic moorings are acceptable only as part of the overall mooring pattern, please answer "Yes" to this question and explain (e.g. wire tails to be fitted)

Conceptual Version

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
11.10	Are there any restrictions on using high modulus synthetic mooring ropes ?	If 'Yes' provide details. These ropes are constructed of high strength, high modulus fibres such as Aramid, High Modulus Polyethylene (HMPE) or Liquid Crystal Polymer. These fibres are much stronger and stiffer than conventional synthetic fibres and much lighter and more flexible than wires. A high modulus synthetic mooring will have strength and diameter broadly equivalent to those of wire ropes. See OCIMF 'Mooring Equipment Guidelines' for more information.
11.11	Details of any specific mooring equipment required for any vessel utilising the berth	Examples of specific mooring equipment requirements might include "All wires to be fitted with 11m nylon tails" or "A 4m length of 24mm dia messenger to be attached to the eye of each mooring rope for securing to the mooring buoy" etc.
11.12	Does the terminal require the vessel to rig Emergency Towing Off Penants (ETOPs) while at the berth?	*ref.OCIMF Position Paper - Lloyds Register Risk Assessment of ETOPs on board Tank Vessel and Recommendation for alternatives to Traditional Emergency Tow-Off pendants.*
11.13	Details of any shore-provided mooring equipment	Where shore mooring ropes or swamp moorings are to be secured on board the vessel please provide details of size and construction of the moorings, required position on board and minimum SWL of bitts required for these moorings.
11.14	Are berthing aids provided ?	In this context, berthing aids include any electronic indicator provided at the terminal to appraise the pilot and Master of key berthing data such as distance off fenders, approach velocity, distance to manifold alignment, speed of advance.
11.15	State allowable speed of approach if applicable	Please state maximum permissible approach velocity. Where different approach speeds are permissible for varying sizes of vessel please list the max velocity against each category of ship size. Where there are any restrictions regarding nominal angular approach to achieve first fender contact when berthing, such restrictions may also be included.
11.16	Is a mooring tension monitor fitted?	
11.17	Are Mooring Hook quick release arrangements provided?	
11.18	Chain Stopper Requirements	Where ships are moored to single point moorings please state the number and safe working load of the chain stoppers required. In accordance with the Mooring Equipment Guidelines, chain stoppers for use at SPMs will accommodate 76mm chafe chain. It should be noted that some existing vessels are fitted with two stoppers but a single central fairlead. It has been found that the use of a single central bow fairlead may cause problems when trying to heave the second chain. Where the terminal requires that two fairleads be fitted, this should be stated above.

Concept for Version 5

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
11.19	Largest ship handled at berth to date	Please indicate the name and IMO number of the largest vessel to have used the berth under current berth limitations (if the berth has been modified, for instance, the largest vessel since that modification). If the IMO number is not known, please state the vessel's summer deadweight.
11.20	Additional Comments or Information	
12	Berth Details	**Mooring and Berthing Information**
12.1	Number, type and size of cargo transfer connections	State the type as "loading arm", "hose" or "gantry suspended hose" and for size give the specification of the presentation flange required. e.g. 2 x Hose, 16" ANSI 150, 2 x Hose, 12" ANSI 150
12.2	List Grades handled at berth	*Drop Down Box options::* *Crude Oils/ Condensates* *Bitumen (including cut-backs)* *Black Petroleum Products* *Heavy Distillates* *Gasoils, Diesels and Kerosenes* *Gasolines and Gasoline Blendstocks* *Naphtha* *Platformate, Raffinate, Reformate* *Base Oils and Finished Lubricants* *Commercial LPG* *Chemical Gases* *LNG* *Biodiesel/Biodiesel Blends* *Ethanol/Ethanol Gasoline Blends* *Vegetable Oils* *Liquid Chemicals (not specified above)* State specific grades handled ay berth (e.g. Ekofisk crude oil, Unleaded Gasoline, Jet A1)
12.3	State transfer rate restrictions and back pressure for each cargo grade	State the maximum and minimum transfer rates for each cargo and line including any loading rate restrictions on static accumulator oils at the commencement of loading/discharging. Similarly state any applicable Back Pressure limits at the ship/shore connection for each cargo grade and line. i.e. Jet A1 max load rate for 1st ft innage = 500m³/hr max bulk rate = 1,200 m³/hr Max BP = 5 Barg.
12.4	Are transfer connections fitted with insulation flanges?	State whether all transfer connections are fitted with insulation flanges. If only some are fitted with insulation flanges answer "No" to this question and explain which sections are so fitted and any additional information such as the date of the last insulation test.

Conceptual Version 5

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
12.5	State storage type for LPG	*Drop-down box options: Pressurised; Semi-Pressurised; Refrigerated; Not Applicable.*
12.6	State if any special requirements for vessel manifolds	If the terminal hard arms or hoses cannot be fitted directly to a standard OCIMF manifold, please specify any restrictions that would apply or any additional equipment required. – e.g. “hard arm end couplers cannot be fitted on two adjacent manifolds”
12.7	Is berth fitted with a vapour manifold connection?	State Type and size of vapour connection. State cargo types for which it is required to use vapour connection.
12.8	State throughput rate(s) of vapour recovery system	
12.9	Are Powered Emergency Release Couplings PERCS) installed in the cargo transfer arms?	Where the system is fitted provide details regarding the method(s) of initiation, valve closing interval and surge protection measures as appropriate.
12.10	Does the berth have an Emergency Shut Down (ESD) capability that can be activated by the ship ?	Where the system is fitted provide details regarding the method(s) of initiation, whether ship and shore cargo transfer pumps are stopped by ESD activation, valve closing interval and surge protection measures as appropriate.
12.11	Describe access arrangements between ship and shore.	If a shore gangway state the type of gangway and the mode of operation. State distance fore or aft of manifold area and clear area required for footprint of section to be landed on ship. Confirm that there is back up power available to operate the gangway in the event of primary power failure. State whether the ship is required to provide a safety net or equivalent protection is afforded by the gangway arrangement.
12.12	Does the berth have pollution response equipment ?	Include details such as the availability and proximity to berth of: • containment boom (s), • skimming equipment, • absorbent materials • Dispersant stocks
12.13	Additional comments or information	
13	Berth Details	**Berth Operations**
13.1	What is the primary and backup communication system between ship and terminal during cargo operations?	State whether by telephone, dedicated VHF channel or by shore supplied UHF/VHF radios.
13.2	Is it required that terminal or shore representatives stay on board during operations?	Where local regulation or logistical constraints require personnel to remain on board the vessel throughout the cargo operation, please state “Yes” and provide details in Additional Comments and Information for this Section. State the number, position (e.g. berthing master, cargo inspector, Customs official etc.) and accommodation requirements of personnel required to remain on board

Consultation Version

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
13.3	Specify weather/environmental restrictions for stopping cargo operations, disconnecting hoses or arms and vacating the berth	State all environmental criteria used for the three scenarios, i.e. stopping cargo, disconnecting hard arms or hoses and vacating berth. This to include wind, wave, visibility, swell parameters etc. as may be required for the particular berth. If an open berth any limitations on surge or roll should also be included.
13.4	Are there any restrictions regarding tank cleaning/Crude Oil Washing (COW) operations at the berth?	If 'Yes' provide full details of these restrictions.
13.5	Are there any berth specific requirements regarding tanker inerting procedures?	If 'Yes' state requirements. Such specific requirements could include or not be limited to the following: 1. Specific Berth requirements with regard to ships operating at the berth which are more stringent than IMO SOLAS and FSS Codes regarding tanker inert gas system criteria, such as: • a requirement for tankers of less than 20,000 Tonnes deadweight operating at the berth to have a fully operational inert gas system in use; or • a requirement for tankers to maintain the atmosphere in any part of the cargo tank with an oxygen content not exceeding a value significantly less than 8% by volume (i.e. 5%); or • a requirement that the tanker's inert gas delivery system is capable of delivering a inert gas with an oxygen content significantly less than 5% by volume (i.e. 3%). 2. The requirement for vessels to blanket cargo tanks spaces with nitrogen blanket/padding for specified cargo grades.
13.6	Is there a temperature limit for cargo handled?	If ;Yes' state temperature limits State maximum and / or minimum temperatures permitted at the ship's manifold.

Conceptual Version 1

No	Data Item	Guidance Notes / Information / Diagram Reference
13.7	Is it permitted to undertake double banked operations alongside the berth?	ISGOTT states 'Double banking of ships on a berth for cargo operations should not be conducted unless a formal engineering study and risk assessment have been carried out and a formal procedure and safety plan produced. As a minimum before such activities are agreed, consideration and agreement must be reached by all parties concerned regarding safe arrival and departure, strength of jetty constuction, mooring fittings, mooring arrangements, personnel access, management of opertional safety, liability, contingency planning, fire fighting and emergency departure'. A positive response to this question shall be deemed to indicate compliance with these requirements. Indicate any limiting criteria such as combined displacement or combined beam of both vessels, maximum dimensions of either vessel or berthing constraints for either vessel beyond those stated for single ship operations at the berth.
13.8	Is vessel required to pump water ashore or receive water on board for line clearance purposes?	If 'Yes', provide operational details. State details of when water is to be pumped or loaded, e.g. before or after cargo operations or between grades. State approximate quantities and pressures required along with any other pertinent detail.
13.9	Can the berth be used for Ship-to-Ship transfers using terminal facilities?	State whether it is possible and permissible to transfer cargoes across the berth from one ship to another via the terminal pipeline system.
13.10	State details regarding any environmental restrictions applicable at the berth?	State any restrictions on emissions of cargo vapours, inert gas or engine smoke. State any restrictions relating to noise or light generation including start/stop times, if applicable, for such restrictions.
13.11	Are there any restrictions regarding H_2S content in Cargo Tanks?	At load ports, state the maximum allowable level of H_2S in the vapour space of ship's tanks on arrival. At discharge ports, state the maximum permissible H_2S levels, in the liquid phase, of the cargo being discharged. Please state any related operational requirements.

Conceptual Version

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
13.12	Are there any restrictions regarding Mercaptan content in Cargo Tanks?	If 'Yes'; state restrictions Please state nature of restrictions and any related operational requirements.
13.13	Are there any restrictions on handling stores when a ship is moored to berth?	If 'Yes' state restriction. If storing is not permitted during cargo operations state the restrictions applicable e.g. "Not permitted during handling of low flash cargo", "stores barges may not be moved during cargo operations", etc.
13.14	Additional comments or information	Provide details regarding any other terminal-specific requirements such as line clearing or draining.
14	Berth Details	**Available Services**
14.1	Are Fuel Oil Bunkers available?	If 'Yes'; state how delivered (e.g. Ex Pipe, Barge, Truck)
14.2	Are Diesel Oil bunkers available?	If 'Yes'; state how delivered (e.g. Ex Pipe, Barge, Truck).
14.3	Are Intermediate Oil bunkers available?	If 'Yes'; state how delivered (e.g. Ex Pipe, Barge, Truck)
14.4	Is Fresh Water available?	If 'Yes'; state how delivered (e.g. Ex Pipe, Barge, Truck)
14.5	Are slop reception facilities available?	If 'Yes'; state how delivered (e.g. Ex Pipe, Barge, Truck) State capacity of slop reception facilities State any specific exclusions for slop receipts (e.g. chemicals, detergents, cleaning agents)
14.6	Are dirty ballast reception facilities available?	If 'Yes', state how received. State capacity of dirty ballast reception facilities
14.7	Are engine room sludge and bilge reception facilities available?	If 'Yes'; state how delivered (e.g. Ex Pipe, Barge, Truck)

Conceptual Version 5

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
14.8	Are garbage reception facilities available?	If 'Yes', provide details Specify any limitations regarding quantity, type of garbage handled and how offloaded.
14.9	Additional comments or information	Included comments or information may include inerting facilities for vessels not fitted with Inert Gas Plant.
15	Berth Details	**Berth Low Temperature Impact**
15.1	What is the typical range of temperatures the terminal operates in during a winter season?	Specify historic minimum, maximum and average temperature during cold season
15.2	Which months of the year can ice be expected?	
15.3	Specify any terminal requirements for vessel Ice Class Notation and winterisation capabilities	
15.4	State any limitations for cargo operations in sub-zero temperatures	
15.5	State the minimum allowable ambient temperature for safe cargo operations	State minimum allowable ambient temperature at what cargo operations will be suspended?

Conceptual Version 5

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
15.6	State the minimum temperature of cargoes handled	
15.7	State the minimum temperature for the emergency shut-down system to operate safely	
15.8	Does the terminal have its own resources for conducting icebreaker escort	Provide details and specify how they can be requested
15.9	State details of icebreakers available to operate	Specify details (e.g. Name/IMO Nr/GRT/Power/Ice Class)
15.10	State details of the ice capability of the terminal's tugs and support craft	Specify details (e.g. Name/IMO Nr/GRT/Power/Ice Class)
15.11	Does the terminal have specific requirements for the vessel speed and maneuverability characteristics in ice ?	If 'Yes', provide details
15.12	Does the terminal provide its own ice navigator/advisor?	If 'Yes', provide details of how the service may be requested

Conceptual Version 5

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
15.13	Additional comments or information	
16	Berth Details	**Supplementary Information**
16.1	Is Jetty open (piled) or solid?	Provide details of whether the berth is a piled jetty (open), solid wharf (closed) or other berth (such as buoyed berth). This question is intended to provide an indication of the berth's transparency**. **Transparency refers to the degree of resistance of the berth structure to prevailing wind, sea, current and swell conditions (i.e. a solid jetty will create more resistance).
16.2	Specify datum used for height and depth measurements in this section	*Datum levels included in Drop Down Box:* *Chart Datum [CD]* *Lowest Astronomical Tide [LAT]* *Mean Low Water Springs [MLWS]* *Mean Lower Low Water [MLLW}* *Mean Low Water [MLW}* *Mean Sea Level [MSL or Zo]* *Normaal Amsterdam Peil [NAP]* *National Geodetic Vertical Datum [NGVD]* *Mean High Water {MHW}* *Mean Higher High Water {MHHW}* *Mean High Water Springs {MHWS}* *Kanal Peil [KP]* *Other (specify*
16.3	Berth height above datum	**Diagram D**
16.4	Berth heading	The True compass heading of the fender face/berthing line to the right of the target line facing shoreward. **Diagram B**
16.5	Width of channel adjacent to berth	The value entered into this field should correspond to the navigable width of the channel perpendicular to the fender face/berthing line.

Conceptual Version 5

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
16.6	Position of mooring bollards and hooks	Hook/Bollard ID Number and Type | 'x' dist to Target Line (m) | 'y' dist to Fender Face (m) | Height (m) | SWL (tonnes) Input x and y values in accordance with horizontal co-ordinate system. Input values corresponding to heights above (+ve) or below (-ve) the jetty main deck in way of the loading arm or shore connection flanges. The Safe Working Load for each mooring bollard and hook should be entered in this field. Note: If the Safe Working Load of the supporting structure is less than the mooring hook or bollard which it supports, then this value should be entered into the input field. **Diagrams A, C & D**
16.7	Position of mooring buoys	Mooring Buoy ID Number | 'x' Dist to Target Line (m) | 'y' Dist to Fender Face (m) | Height (m) | Max. Allow Load (tonnes) Correction required to x and y column headings above Input x and y values in accordance with horizontal co-ordinate system. The height of a mooring buoy is the height of its mooring eye above the water level. The Maximum Allowable Load for each mooring buoy corresponds to the weakest link in the buoy mooring system between the mooring eye and the buoy's ground mooring.

Conceptual

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
16.8	Fender Location	

Fender ID Number	'x' Dist to Target Line (m)	Elevation of Fenders (m)	Fender Width (m)	Fender Height (m)	Fender Contact Area (m3)

Enter details regarding the manufacturer, model or type description or number for the fenders.

Input x values in accordance with horizontal co-ordinate system. No y values required. Fender distances are measured from the horizontal centre of the face of each fender section or unit.

Input values corresponding to height of vertical centre of fenders above (+ve) or below (-ve) the jetty main deck in way of the loading arm or shore connection flanges.

Input value corresponding to the minimum width of contact face of the fender panel.

Input value corresponding to the minimum height of contact face of the fender panel.

Input value in m sq. for the contact area of irregular shaped fender units.

Diagrams C & D

Conceptual

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
16.9	Fender Reaction Data	Fender Id Number | Point No. | Compression (metres) | Load (tonnes) Important factors with regard to fender performance include the following: - Face panel area - Width of rubber - Grade of rubber How to define shape force/deflection curve: - Centre or off centre contact - Jetty structure deflection Temperature It should be noted that the reaction force increases with decreasing temperature and that fenders are tested at 23 degrees C according to the PIANC test method. Up to 10 points along the force/deflection curve should be selected and input to Table above. The zero origin does not need entering and the first point should be at the end of the 'linear' part of the curve. **Diagrams J & K**
16.10	Fender friction coefficient (μ)	If known input value between 0 and 1
16.11	State identity and position of loading arms	Loading Arm/Shore Connection ID Number | Horizontal co-ordinate X | Horizontal co-ordinate Y Input x and y values in table above in accordance with horizontal co-ordinate system.

Concept

No	Data Item	Guidance Notes / *Information* / *Diagram Reference*
16.12	State Loading arm operating limits	Loading Arm ID Number | Max Op Height | Min Op Height | Max Excursion Surge | Max Excursion Sway | Max Excursion Heave Input data fields are provided in table above for the following loading arm limits: a) Maximum operating height above datum b) Minimum operating height above datum c) Maximum excursion limit for surge (Fore and Aft) i.e.. +/- x values d) Maximum excursion limit for sway (athwartships) i.e. +/- y value e) Maximum excursion limit for heave (vertical) i.e. +/- value
16.13	Additional comments or information	

Conceptual V

5. Plans and Diagrams

Diagram A Q16.6

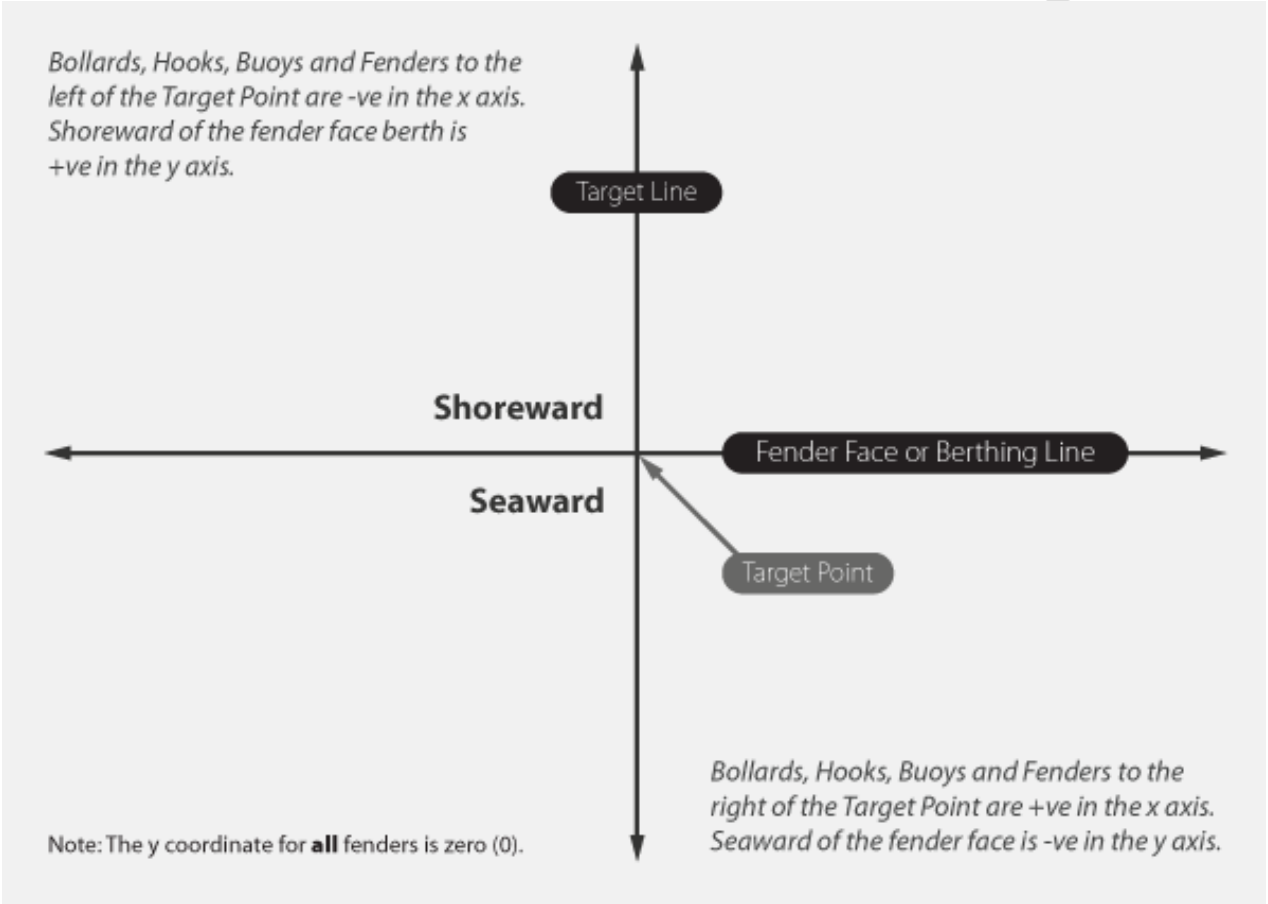


Diagram B **Q16.4**

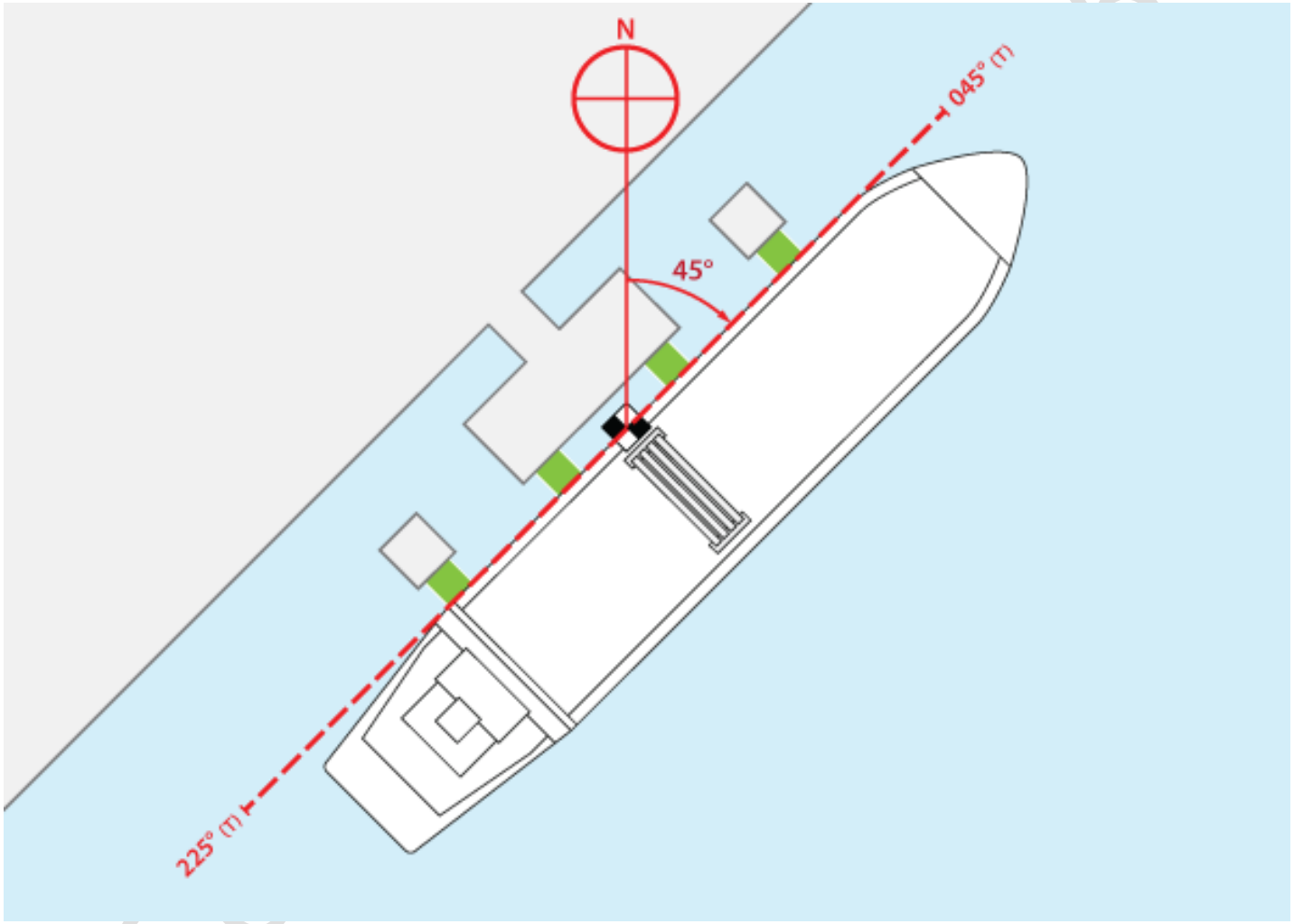
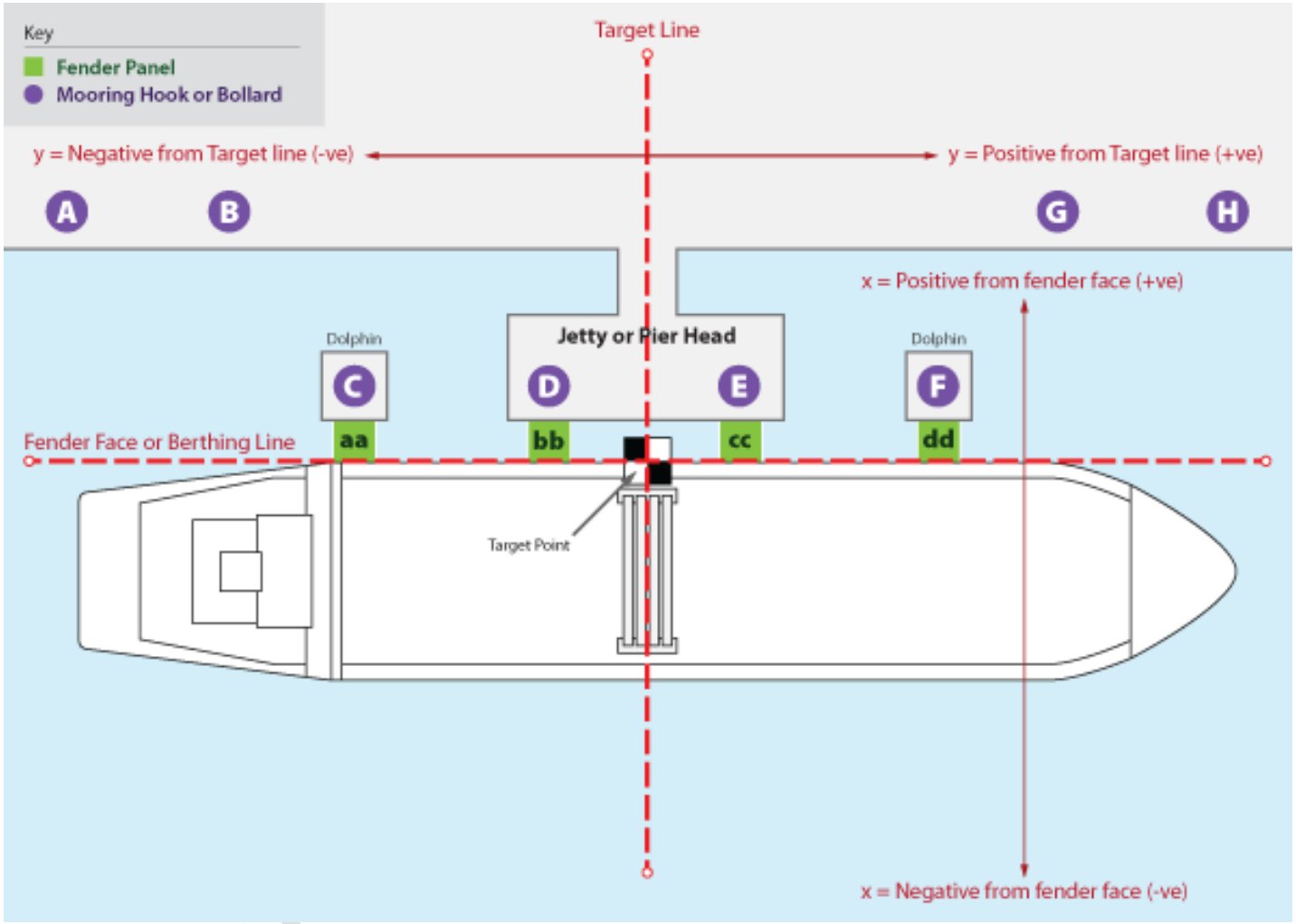


Diagram C **Q7.3; Q16.6: Q16.8**



<u>Diagram D</u> **Q16.3; Q16.6; Q16.8**

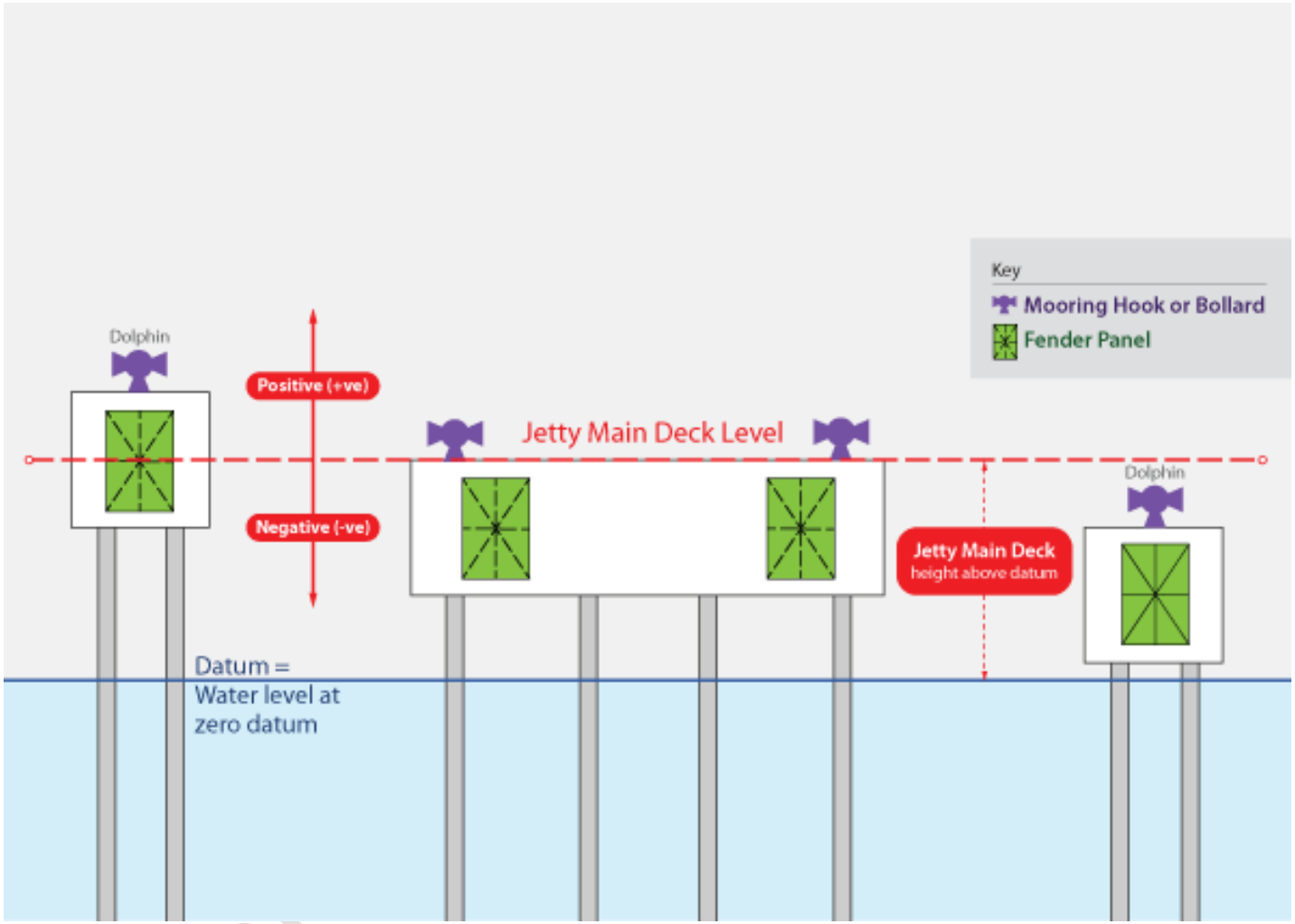
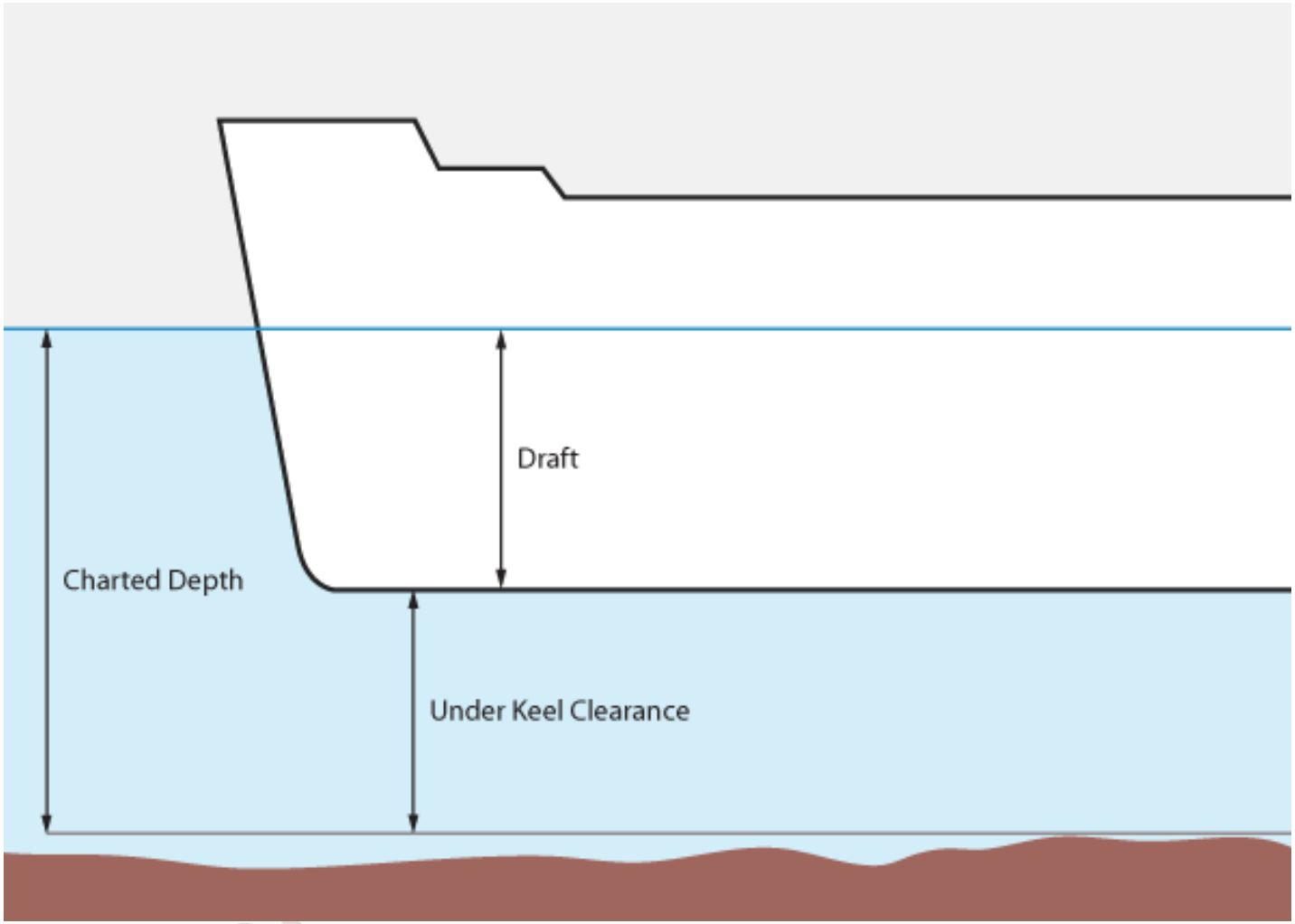


Diagram E **Q8.10**



<u>Diagram F</u> Q8.10

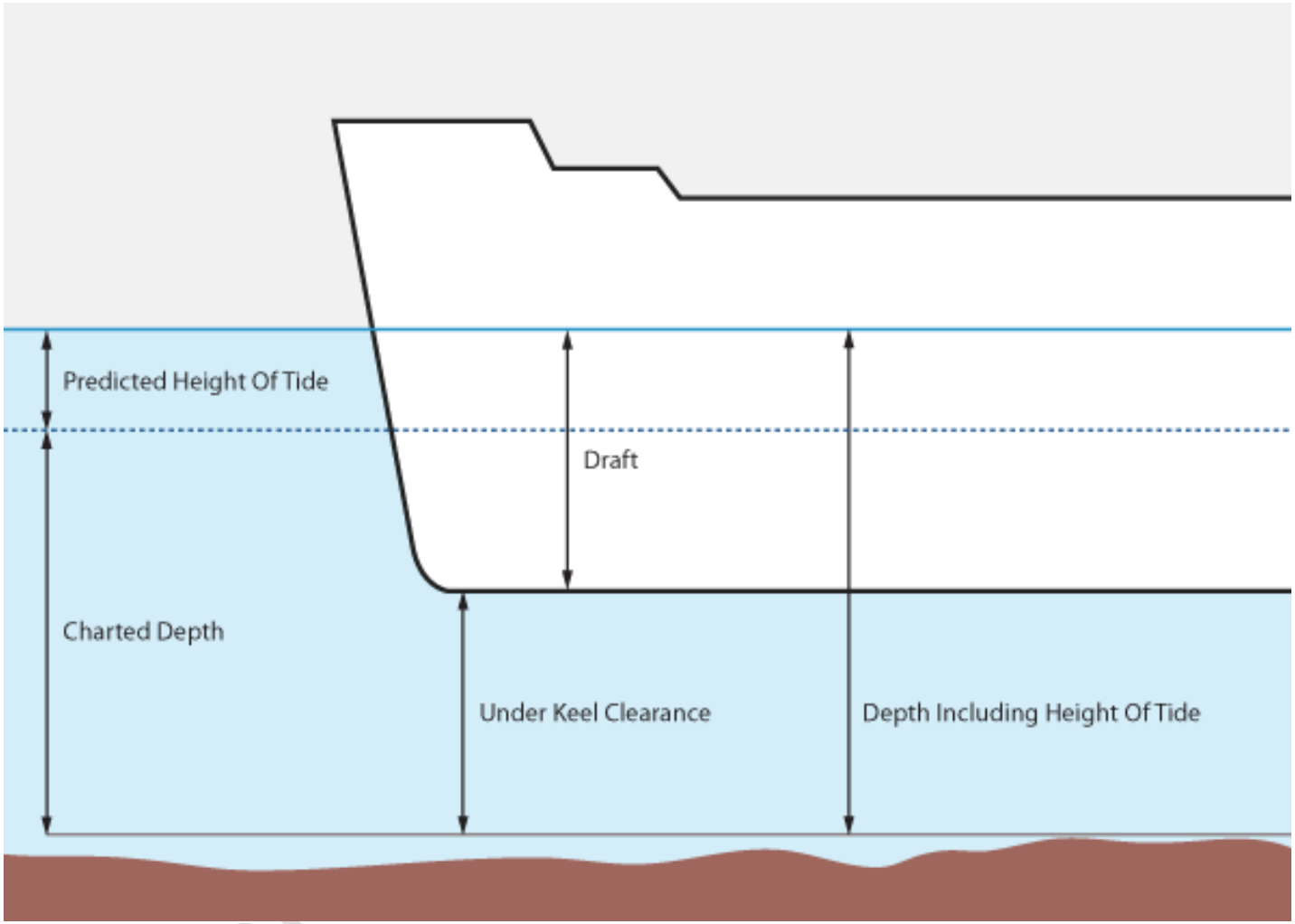


Diagram G **Q10.6; Q10.7; Q10.8; Q10.9; Q10.10; Q11; Q10.12**

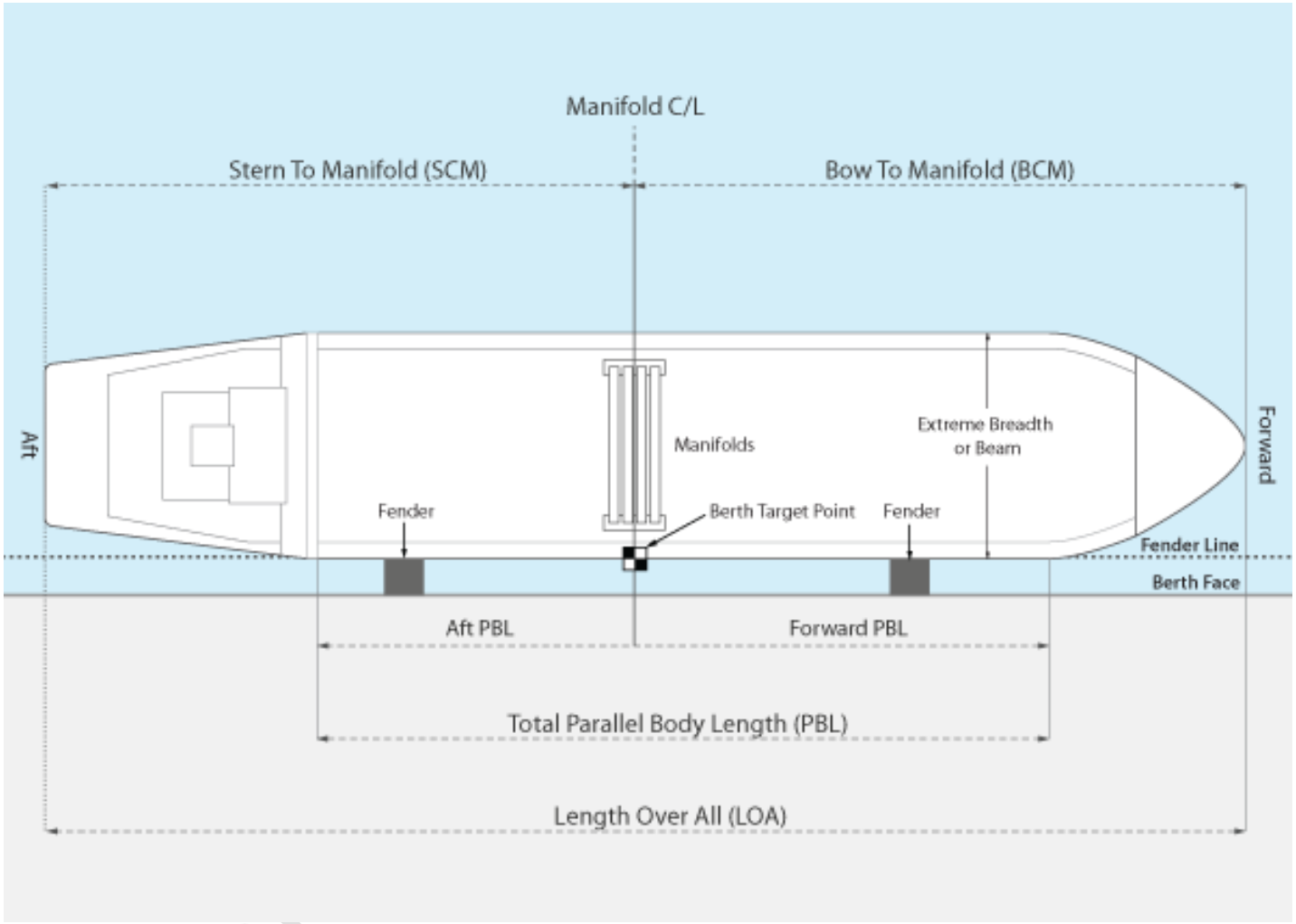


Diagram H **Q8.12; Q10.7; Q10.13; Q10.14; Q10.18**

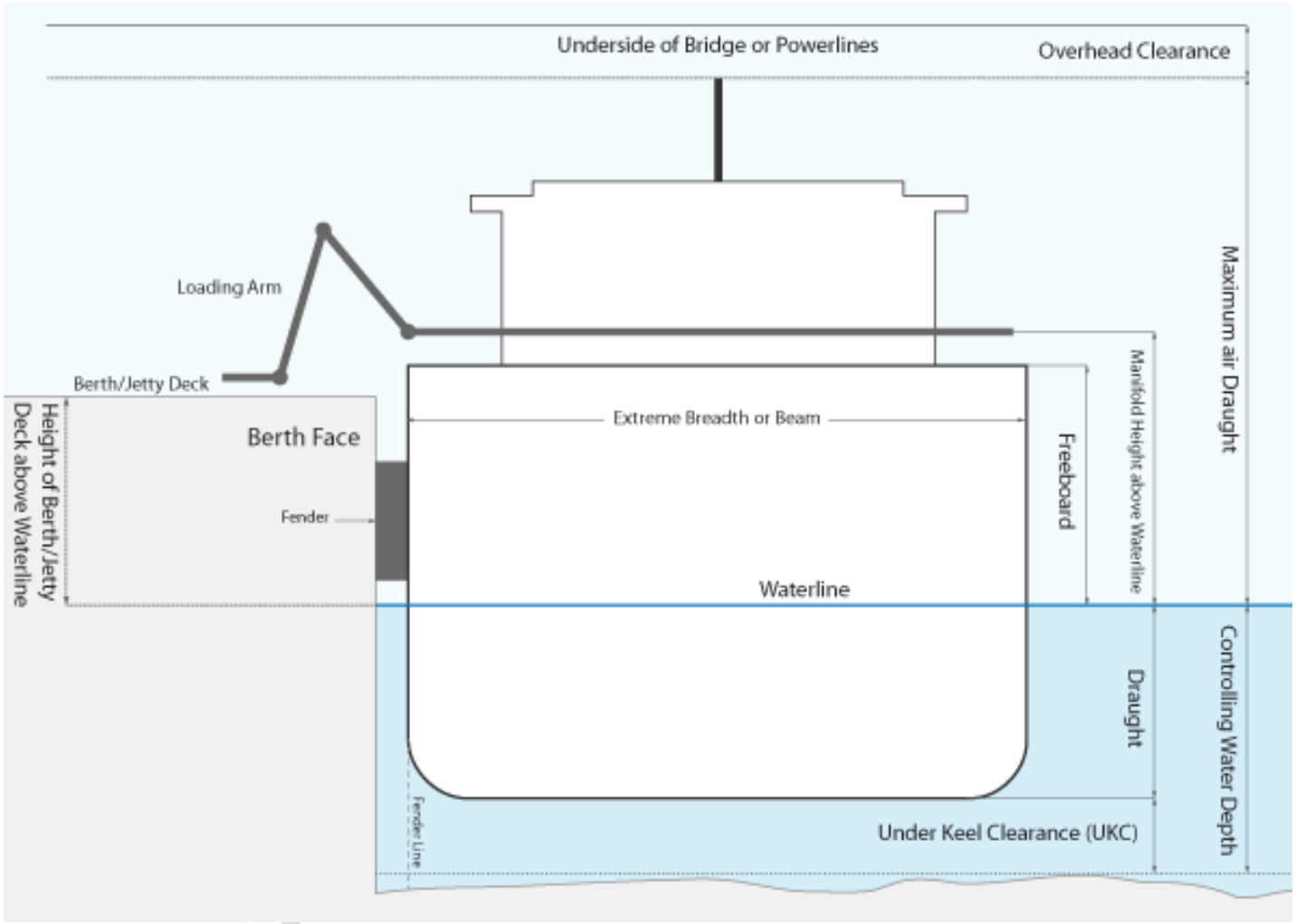


Diagram J **Q16.9**

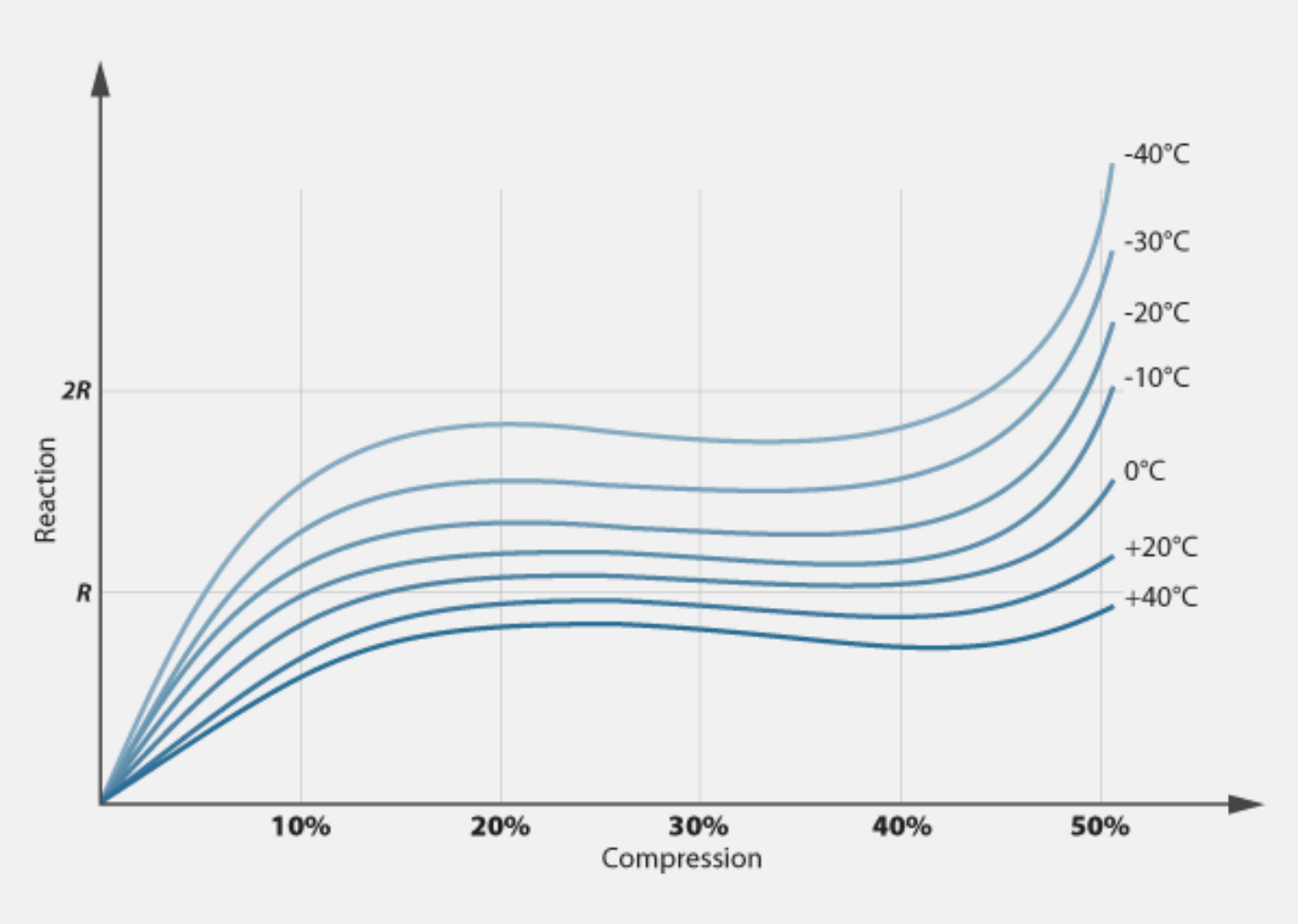


Diagram K **Q16.9**

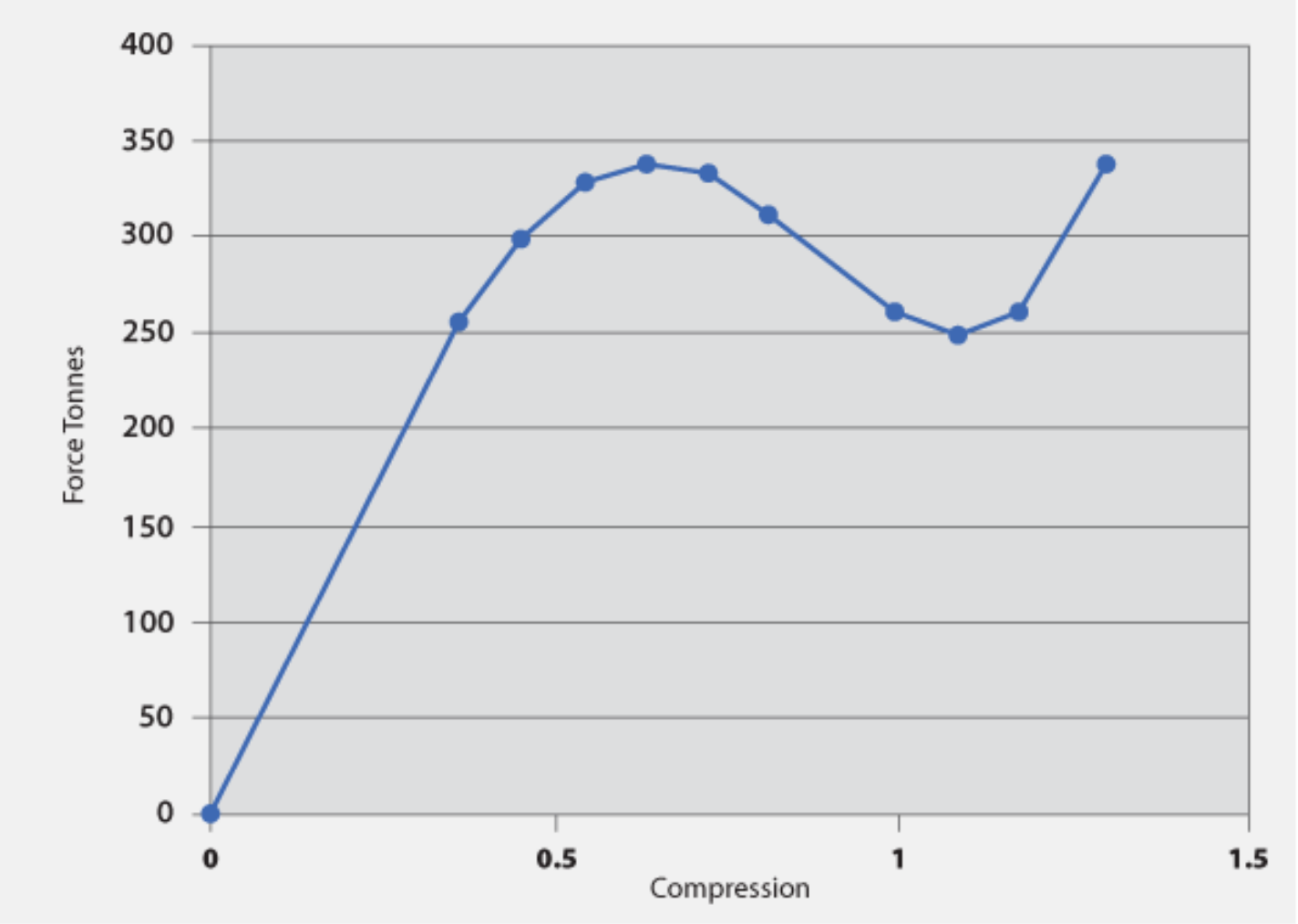
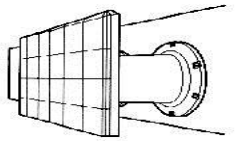
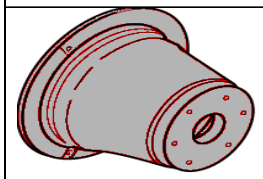


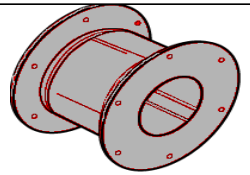
Diagram L **Q11.3**



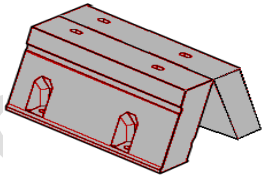
Types a to c will have fender panels attached to them as in the above diagram, whilst the remaining fenders are not normally used in conjunction with panels.



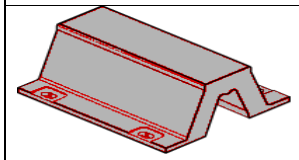
a) Cone Type



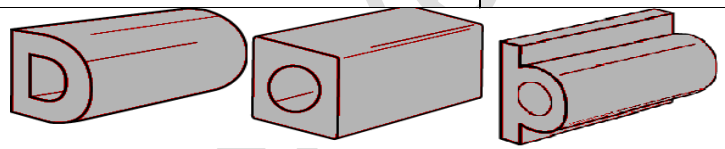
b) Cell Type



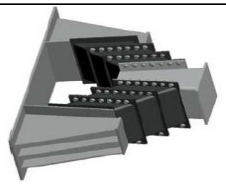
c) Leg Type



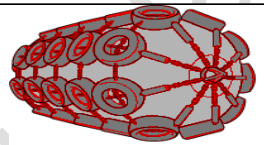
d) Arch Type



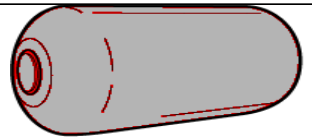
e) Hollow Profile Type



f) Raykin Fender



g) Pneumatic Floating Fenders



h) Foam Filled Floating Fender

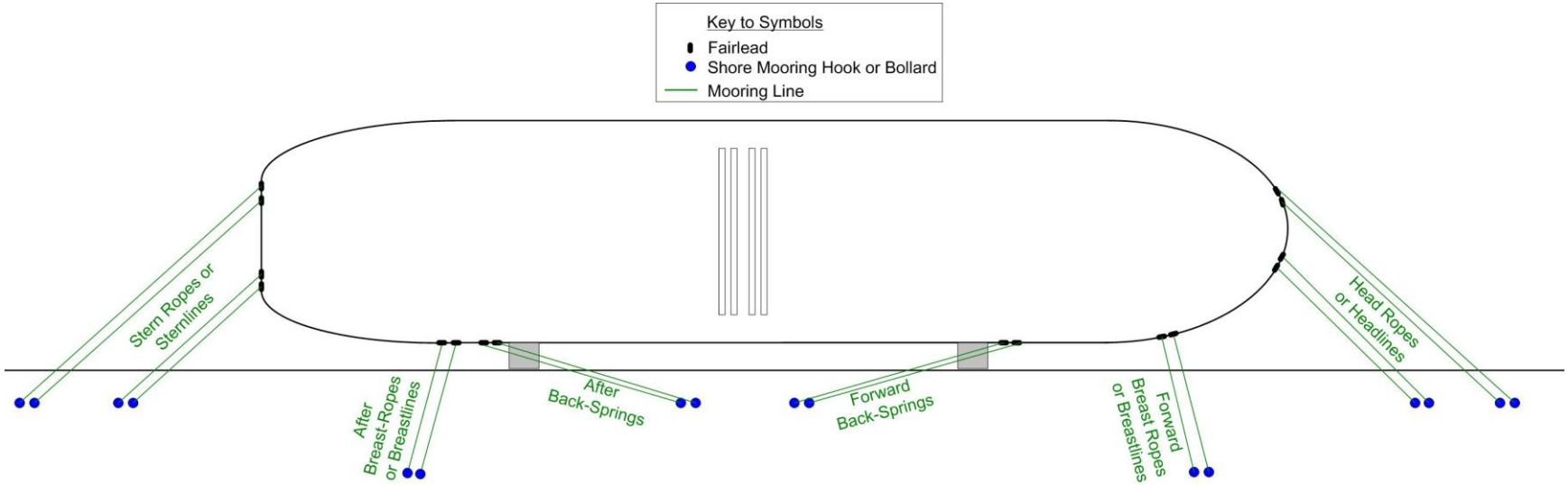
i) Tyre Fenders

j) Wooden Piles or Wooden Panel Fenders

k) Other (not specified)

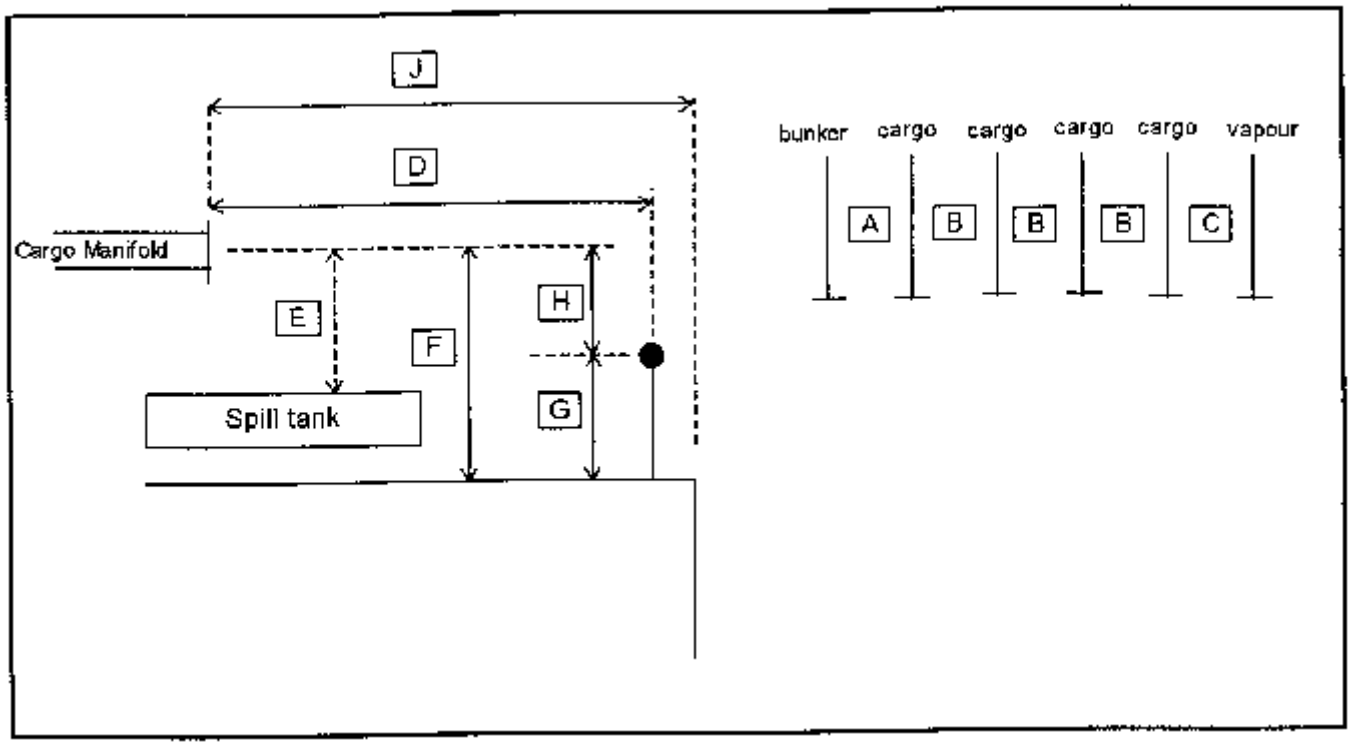
Diagram M Q11.6

Concept Version 5



Conceptual

Diagram N **Q10.15; Q10.16; Q10.17**



Key:
Distance A bunker manifold to cargo manifold
Distance B cargo manifold to cargo manifold
Distance C cargo manifold to vapour return manifold
Distance D manifolds to ship's rail
Distance E spill tank grating to centre of manifold
Distance F main deck to centre of manifold
Distance G maindeck to top of rail
Distance H top of rail to centre of manifold
Distance J manifold to ship side

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6. TPQ Section 16 Supplementary Information Guidelines

The objective of this guidance document is to assist Marine Terminal Management representatives to populate the data fields in the Section 16 of the Terminal Particulars Questionnaire (TPQ).
Such data is intended to enable Mooring Load Analyses to be conducted for the berths associated with their Terminal to verify ship/berth compatibility for a variety of vessel sizes in accordance with the dimensional limits declared elsewhere in the Terminal Particulars Questionnaire.

Completion of such Mooring Analyses is recommended in the OCIMF Marine Terminal Baseline Criteria as per the examples below.

Regarding 'Fendering' the Baseline Criteria states the following:
Fendering systems at each berth should be engineered to suit the sizes of vessels expected to use the berth so as to ensure the safe berthing and mooring of vessels at marine terminals.

Furthermore it recommends 'Fendering systems at each berth should be engineered to suit the sizes of vessels expected to use the berth so as to ensure the safe berthing and mooring of vessels at marine terminals'.

Regarding 'Moorings' the Baseline Criteria states the following:
'Every terminal should provide mooring equipment on their berths appropriate for the sizes of vessels using the berths. The terminal should also provide mooring arrangements for all berths and for all sizes of vessels which can be moored at those berths'.

Furthermore it recommends 'that the mooring arrangements for all vessel sizes be determined by the use of an engineering (mooring and fendering) analysis'.

Regarding 'Double Banking' operations the Baseline Criteria recommends that a Mooring Study is conducted for single ship operation and also double banked vessel operations in all configurations of loaded and ballasted ships.

Completion of the Addendum to the Terminal Questionnaire is currently non mandatory, but it is anticipated that its completion will become mandatory in the future.

In the meantime both the time and effort taken by Marine Terminals to complete the TPQ Addendum would be appreciated by OCIMF Members. Such effort would be perceived as evidence that the Terminal are demonstrating both transparency and due diligence with regard to how it assures that vessels operating at their berths are dimensionally compatible with same.

Conceptual Version 4

Berth Mapping Co-ordinate system

For the purpose of mapping the location of all the key elements of the berth to enable a Mooring Load Analysis to be conducted the system is based upon the following key assumption:

- *The berth orientation and sign convention for fenders mooring hooks and bollards are assessed from the viewpoint of an observer located at the 'Target Point' facing shoreward.*

The 'Target Point' referred to in the foregoing can be defined as one of the following:

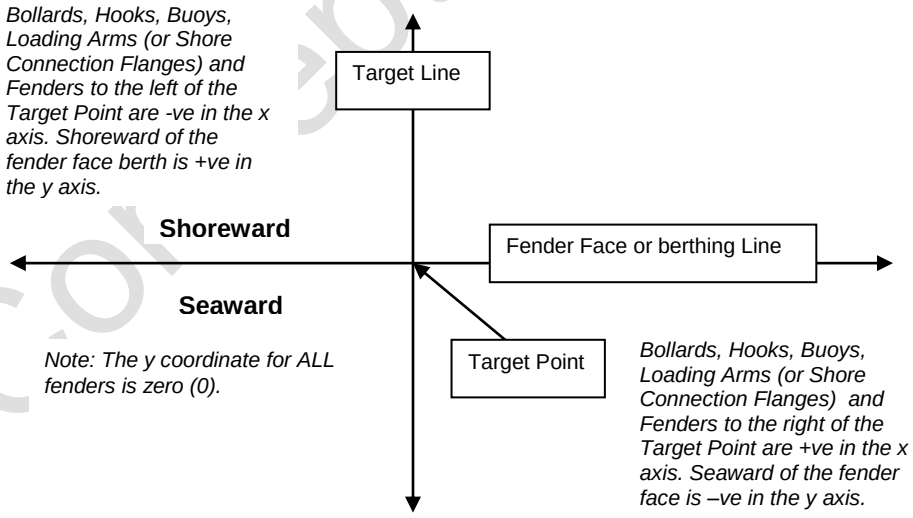
(i) The location where the ship's manifold centreline intersects with the berth's fender face or berthing line.

(ii) The location where the berth's central or most frequently utilised loading arm or shore connection flange intersects with the berth's fender face or berthing line.

(iii) The location where the 'sighting' or 'target' line customarily used by the Terminal or Pilots for positioning a vessel at the berth intersects with the berth's fender face or berthing line.

It must be noted that the foregoing key assumption is NOT affected by the orientation of the ship on the berth. It makes no difference to the berth's mapping co-ordinates whether the vessel is berthed Port Side to or Starboard side to.

Sign Convention used in Section 16 of the TPQ for fenders, mooring hooks, bollards & Buoys



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The berth direction is always taken to be the True compass heading of the berthing line to the right of the target point facing shoreward.

Horizontal Co-ordinate system

Mooring Hooks, Bollards and Buoys

Facing shoreward, Hooks, Bollards and Buoys are labelled **A** to **Z** from left to right.

For mapping purposes, distances are in metres and are captured as follows:

(i) X axis co-ordinates
Distances from Target Line.
Positive (+ve) to right, Negative (-ve) to left.

(ii) Y axis co-ordinates
Distance from fender face or berthing line.
Positive (+ve) towards shore, Negative (-ve) towards vessel.

Fenders

Facing shoreward, Fenders are labelled **aa** to **zz** from left to right.

For mapping purposes, distances are in metres and are captured as follows:

(i) X axis co-ordinates
Distances from Target Line.
Positive (+ve) to right, Negative (-ve) to left.

(ii) Y axis co-ordinates
Distance from fender face or berthing line is ALWAYS zero, so no data input field is included for this value.

Fender distances are measured from the geometrical centre of the face of each fender section or unit, both horizontally and vertically.

Vertical Co-ordinate system

The height of the jetty main deck in way of the loading arm or shore connection flanges is measured above the water level corresponding to zero datum.

The height of all mooring hooks and bollards are measured either above the jetty main deck (+ ve) or below the jetty main deck (- ve).

The height of the geometric centres of all fenders are measured above the water level corresponding to zero datum and is always positive (+ve).

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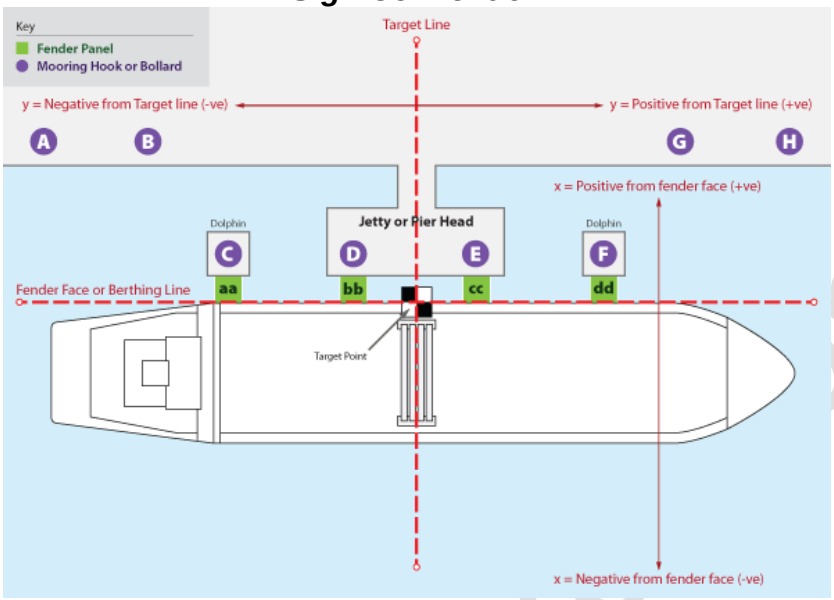
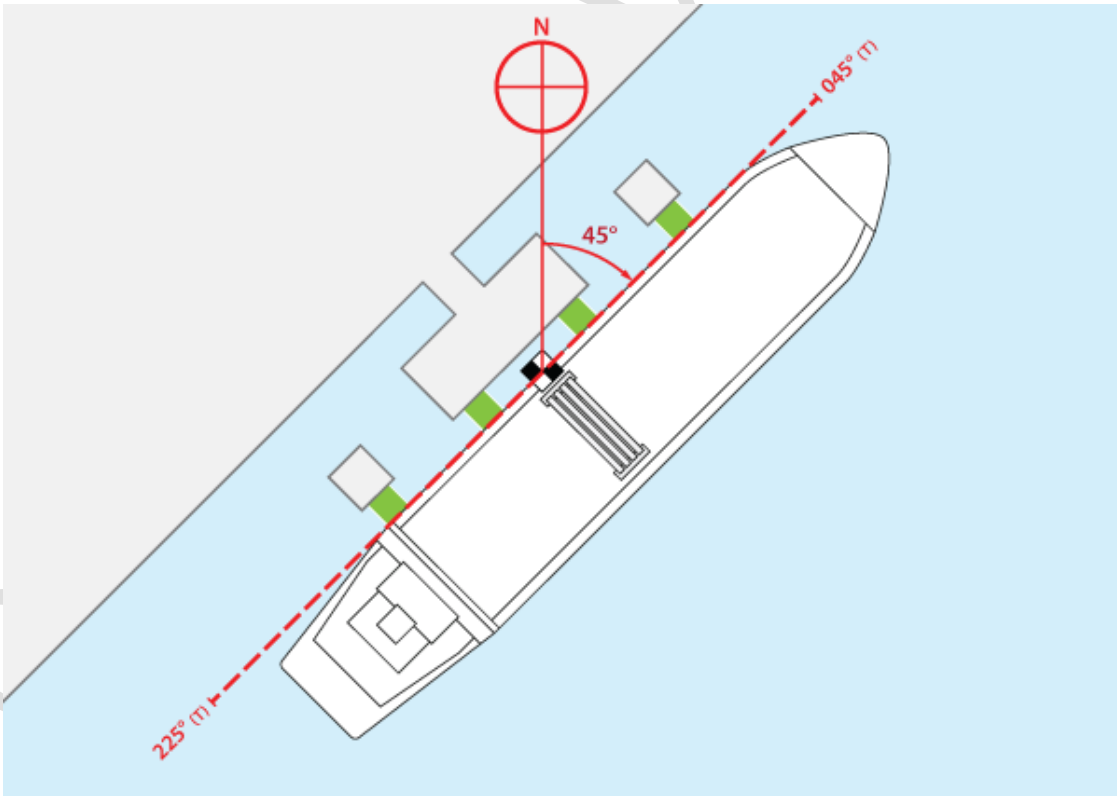
The height of the mooring eye attachments of the mooring buoys are measured above the water level corresponding to zero datum.

Sign Convention

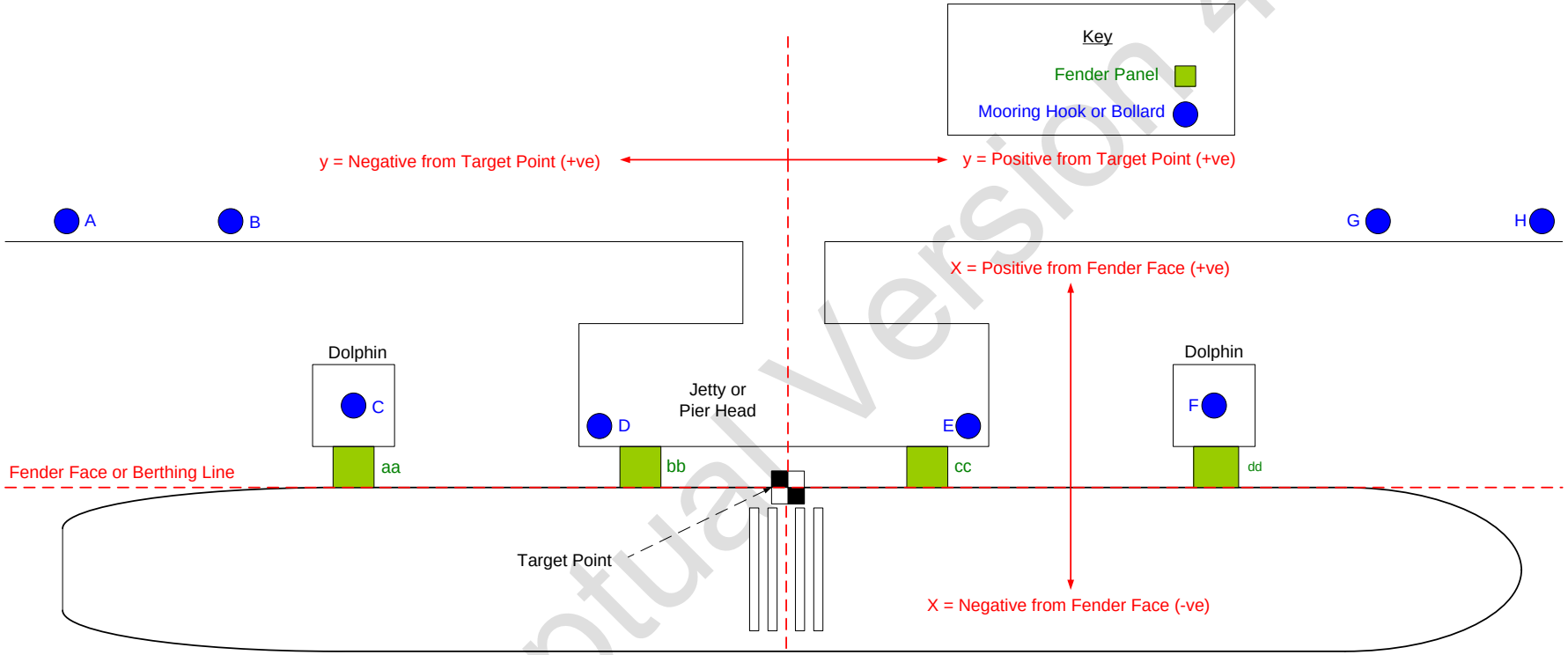


Berth Orientation



Note: The berth's heading is NOT affected by the orientation of the ship on the berth. It makes no difference to the berth's mapping co-ordinates whether the vessel is berthed Port Side to or Starboard side to.

Berth Plan



Note:
The example above is for a typical 'T' Jetty configuration. The methodology for locating the Target Point could be applied to Finger-piers, Wharfs and Sea Islands. The 'Target Line' used in the example corresponds to the vessel's manifold centreline.

For CBM / MBM Berths the Target point could either be the location where the submarine hose is lifted over the ship's rail or the location where the ship's Fore and Aft Centreline intersects her Manifold Centreline athwartships.

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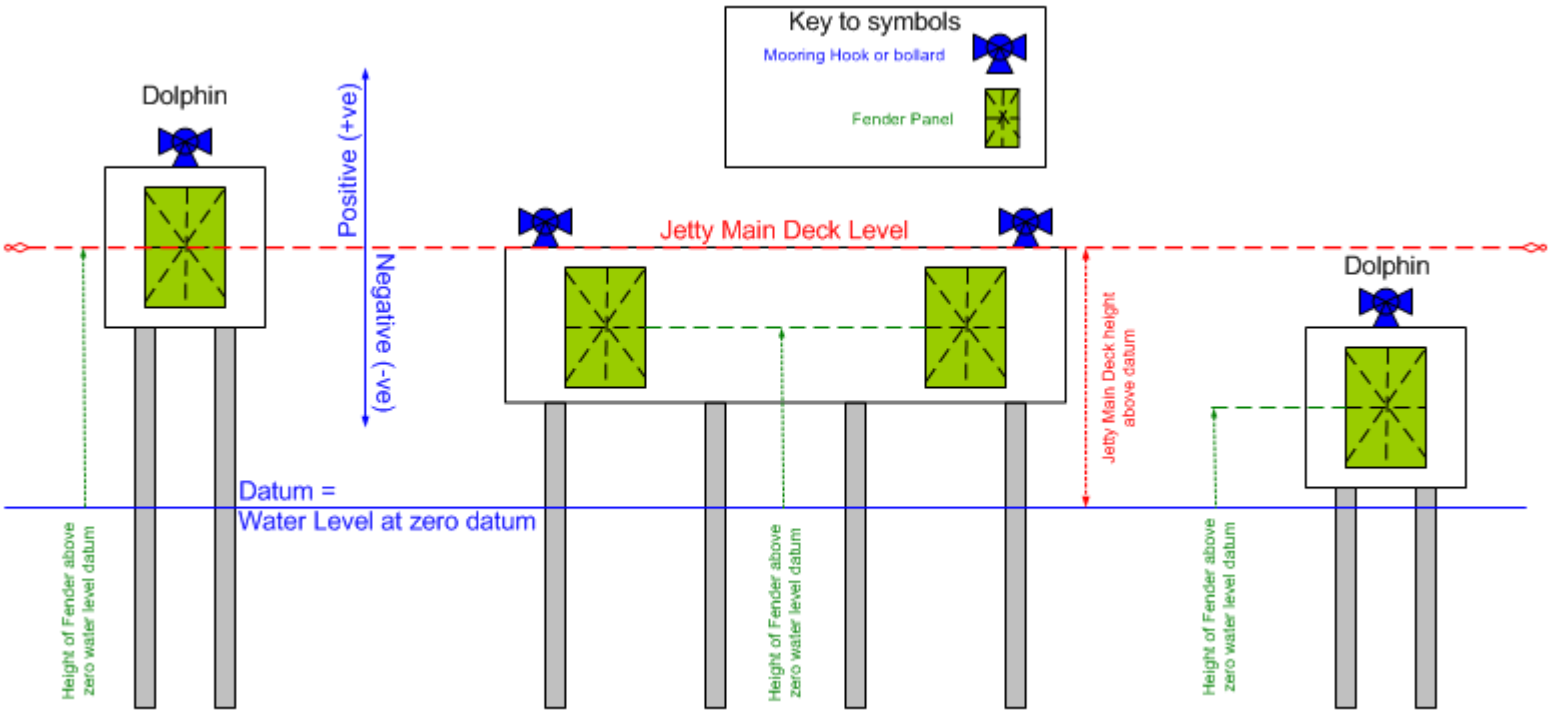
For SBM / SPM Berths the Target Point should be located at the ship's fairlead through which the SBM / SPM Mooring Chain and Hawser is deployed.

Berth Elevation



Note:
The zero datum water level used should be clearly identified in the appropriate input field in the TPQ Addendum.

Fender distances are measured from the geometrical centre of the face of each fender section or unit, both horizontally and vertically. This corresponds to the intersection between the pecked lines in the above diagram.

Height adjustments need to be made for the height of the load supporting point of the mooring hooks or bollards above their supporting structures.

Guidance Notes for TPQ Section 16 Data Input Fields

Preferred berthing orientation for vessels alongside
Whether Port or Starboard side to or either and whether any stated preference is mandatory.

Berth Transparency to prevailing wind and sea conditions
Is Jetty open (piled) or solid?

Specify datum used for height and depth measurements in TPQ Addendum
Ideally the datum should correspond to the local zero datum used to baseline tidal predictions, river stage forecasts or temporary water level variation due to prevailing meteorological conditions.

A few examples of such Datum levels are as follows:

Name	Abbreviation
Chart Datum	CD
Lowest Astronomical Tide	LAT
Mean Low Water Springs	MHWS
Mean Lowest Low Water	MLLW
Mean Low Water	MLW
Mean Sea Level	MSL or Zo
Normaal Amsterdam Peil	NAP
National Geodetic Vertical Datum	NGVD
Kanal Peil	KP

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Berth Height above datum
This refers to the height of the jetty main deck in way of the loading arm or shore connection flanges as measured above the water level corresponding to zero datum.

Dredged Depth below datum
This refers to the minimum depth of water available for the largest compatible vessel adjacent to the fender faces or berthing line measured below the water level corresponding to zero datum.

Berth Heading
True compass direction of fender face/berthing line to the right of the target line facing shoreward.

Width of Channel adjacent to berth
The value entered into this field should correspond to the navigable width of the channel perpendicular to the fender face/berthing line.

Position of mooring bollards and hooks
Input x and y values in accordance with horizontal co-ordinate system.

Height of mooring bollards and hooks
Input values corresponding to heights above (+ve) or below (-ve) the jetty main deck in way of the loading arm or shore connection flanges.

Mooring bollard and hook rating
The Safe Working Load for each mooring bollard and hoof should be entered into this field.
Note:
If the Safe Working Load of the supporting structure is less than the mooring hook or bollard which it supports, then this value should entered into the input field.

Position of mooring buoys
Input x and y values in accordance with horizontal co-ordinate system.

Height of mooring buoys

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The height of mooring buoys is the height of its mooring eye above the water level corresponding to zero datum.

Mooring buoy load rating
The Maximum Allowable Load for each mooring buoy corresponds to the weakest link in the buoy mooring system between the mooring eye and the buoy's ground mooring.

Position of Fenders
Input x values in accordance with horizontal co-ordinate system. No y values required.
Fender distances are measured from the horizontal centre of the face of each fender section or unit.

Height of Fenders
Input values corresponding to height of vertical centre of fenders above (+ve) or below (-ve) the jetty main deck in way of the loading arm or shore connection flanges.

Fender Specification
Free Text input field for entering details regarding the manufacturer, model or type description or number for the fenders.

Fender Width
Input value corresponding to the minimum width of contact face of the fender panel.

Fender Height
Input value corresponding to the minimum height of contact face of the fender panel.

Fender Contact Area
Input value in m^2 for the contact area of irregular shaped fender units.

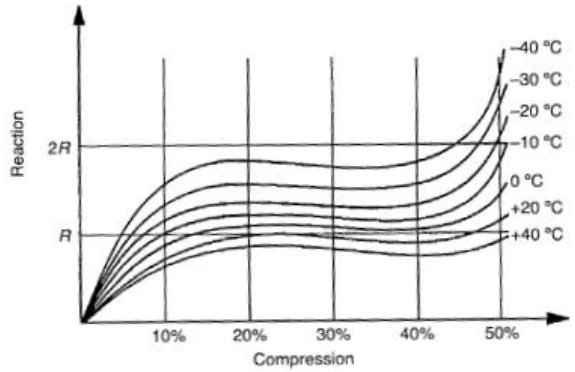
Fender Reaction Data
Important factors with regard to fender performance include the following:

- Face panel area
- Width rubber
- Grade rubber
- How to define shape force/deflection curve

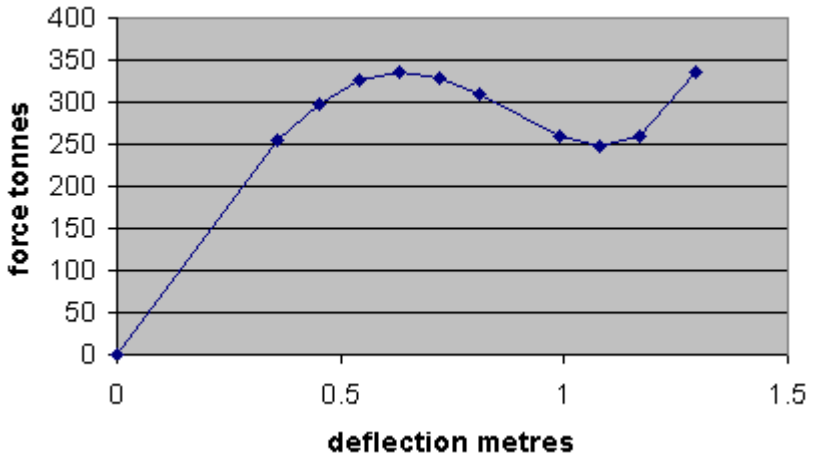
Conceptual Version 4

- Centre or off centre contact
- Jetty structure deflection
- Temperature

Fender Reaction Curve fig 1



Fender Reaction Curve fig 2



The effect of temperature on the force deflection curve is shown in figure 1 above where the reaction force increases with decreasing temperature. It should be noted that fenders tested are 23°c according to the PIANC test method.

Up to 10 points along the force/deflection curve should be selected and input in the TPQ Addendum data input fields. The zero origin does not need entering and the first point should be at the end of the “linear” part of the curve e.g. 250 tonnes for the example shown in figure 2 above.

The data input fields for fender reaction data are numbered from 1 to 10 for Load and correlating Compression values.

Fender Friction Coefficient (μ)
If known input appropriate value between 0 and 1.

Loading Arm or Shore Connection Flange Identity

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Free Text input data fields are available for entering the loading arm identification used by the Terminal.

Loading Arm or Shore Connection Flange Position
Input x and y values in accordance with horizontal co-ordinate system.

Loading Arm Operating Limits
Input Data fields are provided for the following loading arm limits:

(i) Maximum operating height above datum.
(ii) Minimum operating height above datum.
(iii) Maximum excursion limit for surge (Fore & Aft) i.e. +/- x value.
(iv) Maximum excursion limit for sway (athwartships) i.e. +/- y value.
(v) Maximum excursion limit for heave (vertical) i.e. +/- value.

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