

6 August 2021

Good day

Dalrymple Bay Coal Terminal – Mooring Line Requirements – Update

Requirement for High Modulus Polyethylene (**HMPE**) lines to be mandatory for all vessels calling at Dalrymple Bay Coal Terminal (**DBCT**) from 01st January 2022 (synthetic tails + 125% main line strength) have been reviewed and an extension for compliance is deferred for a **further 18 months** until **July 2023**.

During this time, analysis and a berthing practices study, specifically involving an analysis of the marine environmental factors and mooring arrangements at DBT will be conducted to determine the best practice approach to safely manage vessels whilst alongside at the Terminal.

Reason for the extension

DBCT P/L's previous stance in relation to mooring line requirements, with a mandated move towards HMPE lines by 01st January 2022, was based primarily on a 'Line Handling Best Practice Study' produced towards the end of 2016 for a number of stakeholders in the region. Since that time, the understanding and best practices associated with modern mooring lines has continued to mature and although there remains some significant benefits associated with HMPE lines, other solutions and maintenance control measures may also effectively minimise the risks presented to the vessel, the terminal, terminal staff and ship's crew when considering mooring arrangements.

DBCT P/L recognises that mooring lines constitute a significant investment and operational overhead for ship owners and operators. As such ensuring that the correct solution for the terminal is implemented first time is a critical requirement.

DBCT P/L is aware that consistency of requirements across terminals in relation to mooring equipment is a key concern for owners and operators of vessels. Assuming that it will not negatively impact safety standards, better alignment of requirements will be a consideration going forward.

An analysis of factors impacting vessels whilst alongside, in particular considerations relating to the exposed open-sea location of the berths and the large tidal range experienced at Hay Point, will form a specific set of requirements relating to best practice mooring equipment requirements and practices to be utilised at DBCT are to be developed.

Mooring line technology and best practice continues to evolve and the considerations in the University of Queensland Line Handling Best Practice Study compiled in 2016 for North Queensland Bulk Ports require to be refreshed.

HMPE lines offer significant advantages over some other typical ship lines, however they may have some limitations dependant on the vessels mooring configuration in relation to use at Hay Point due to the exposed nature of the berths. Although they are very strong for their given

diameter, their low elasticity means that in circumstances where there is high dynamic loading then there may be an increased risk of the lines failing. At the port of Hay Point, this can be challenging due to the vessel's movement under certain sea conditions in particular, with relation to infra-gravity waves (low amplitude, long period waves) related to swell conditions.

Summary

Requirement for High Modulus Polyethylene (**HMPE**) lines to be mandatory for all vessels calling at **DBCT P/L** from 01st January 2022 (synthetic tails + 125% main line strength) have been reviewed and an extension for compliance is deferred for a **further 18 months** until **July 2023**.

Summary plus actions moving forward

Requirement for High Modulus Polyethylene (**HMPE**) lines to be mandatory for all vessels calling at **DBCT P/L** from 01st January 2022 (synthetic tails + 125% main line strength) have been reviewed and an extension for compliance is deferred for a **further 18 months** until **July 2023**.

An analysis and berthing practises study will be completed in this time to determine the best practice approach to safely manage vessels whilst alongside at the Terminal.

Yours sincerely,

Craig Longmuir
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Craig Longmuir
Shipping Superintendent
DBCT P/L

VETTING QUESTIONNAIRE FOR MV (IMO)	
1. Is the vessel a designated single deck / self-trimming / closed hatch bulk carrier? Note: Log carrier, OBO, converted and extended vessels or pontoon hatch cover type vessels prohibited. General Arrangement: A clear copy with <u>mooring arrangements visible</u> MUST be provided with this form		Yes	No		
2. Are ALL mooring lines HMPE/synthetic/polypropylene AND floating type only? Note: Wire, metal shackles, chains and/or metal links are NOT acceptable. Note: HMPE type lines, where recommended by manufacturer, to be fitted with synthetic tails in line with OEM* requirements.		Yes	No		
3. Confirm ropes in survey and inspected every 3 months and will be presented in good condition and be free from wear/abrasion damage.		Yes	No		
4. Confirm compliance with DBCT Mooring Lines Matrix (below).		Yes	No		
DBCT Mooring Lines Matrix					
Vessel deadweight 000's tonnes	Minimum no. of ropes on winch tension drum- NOT ropes on warping drum end or bits / bollards	Winch Heave Capacity minimum (tonnes)	Winch brake Set Point (tonnes) all values are minimum (Note: Maximum not to exceed 70% of rope MBL)	Minimum Breaking Load or Strength of ropes (tonnes)	
40-65	8	12 (118 kN)	25 (245 kN)	42 (412 kN)	
65-95	10	14 (137 kN)	32 (314 kN)	53 (520 kN)	
95-125	12	15 (147 kN)	37 (363 kN)	62 (608 kN)	
125-155	14	15 (147 kN)	37 (363 kN)	62 (608 kN)	
155-185	14	16 (157 kN)	40 (392 kN)	67 (657 kN)	
185-220	16	16 (157 kN)	40 (392 kN)	67 (657 kN)	
<p>- Winch brakes should be set to allow winch to render under high load in accordance with table above -</p> <p>- Additional mooring lines NOT fitted to winch drum must only be secured on <u>mooring bits/bollards</u> -</p> <p>- Chafe guards/protection should be used as per line manufacturer recommendations -</p>					
5. Confirm heaving lines to tugs and messenger lines to shore crew will NOT be heavy or weighted with hard / metal objects. Note: Only rope (monkey fist), heaving line bags or soft rubber sections attached to ends are accepted. Line hooks, metal, rock, wood, etc. are prohibited.		Yes	No		
6. Confirm minimum required rating for tugs (bollard and fairlead Safe Working Load) 65 metric tonnes or 637 kN (sustained pull).		Yes	No		
7. Can the vessel accept a LAND ON helicopter for pilot transfers – WINCH ONLY is NOT acceptable at this port. If “Yes” – the vessel must comply with the provisions of AMSA Marine Order 57.		Yes	No		
8. Confirm vessel can comply with all MARPOL, SOLAS, Queensland Transport Operations (Marine Pollution) Act 1995 and Hay Point Port Procedures requirements. Note: As of the 01 st of January 2020 MARPOL Annex VI 0.50% m/m fuel oil sulphur limit requirements come into effect for Port of Hay Point Waters. For compliance information contact mackay@amsa.gov.au		Yes	No		
9. Confirm vessel WILL berth with propeller 100% immersed and stern trim NOT exceeding 2.5m .		Yes	No		

* OEM - Original Equipment Manufacturer

PRINTED COPIES ARE NOT CONTROLLED DOCUMENTS

Routing:

- Shippers / Users
- Ships Master / Operators
- Shippers / Users
- DBCT Shipping Officers

Filing:

Email & Form attached to electronic ships file
(T:\Logistics\Shipping\SHIP FILES\### ARCHIVE)

10. Confirm compliance with the International Convention for the Control and Management of Ships Ballast Water and Sediments (BWM Convention).	Yes	No
11. Confirm that vessel will be able to fully load within the Maximum Loading Time as per DBCT Deballasting Matrix (below)? (In consideration of questions 9 and 10).	Yes	No

DBCT Deballasting Matrix

Vessel Deadweight 000's tonnes	Expected loading time assuming full cargo loaded (Hrs)	Average Ballast on Board (Mid Range) MT	Average Pump Rate MT/Hour	Acceptable Deballasting time including stripping (maximum Hrs)	Maximum Loading Time (Hrs)
40 - 60	14	12,500	900	14	16
60 - 80	16	21,000	1450	16	18
80 - 100	18	30,000	1800	18	20
100 - 125	22	43,000	2400	22	24
125 - 150	25	plus 50,000	plus 2600	25	28
150 plus	28	plus 50,000	plus 2600	28	32

12. For multi parcel / grade Shipments: Confirm vessel can fully load each parcel/grade before commencing the next.	Yes	No
13. Confirm maximum hatch pours are 2 per hatch plus 2 trimming pours.	Yes	No
14. Are sufficient crew aboard to monitor loading and mooring line tension at all times?	Yes	No
15. Confirm minimum clear deck space from the ship side to the hatch coaming is at least 5m . (Hold 1 hatch, mid ship gangway and crane grab locations <i>can be ignored</i>).	Yes	No

16. Dimensions of each hatch opening (coaming).		Length (m)	Breadth (m)
	1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		

Confirmation signed by the Vessel's Owner, Master, Operator or Technical Manager ONLY

(Sign)(Title)..... /...../..... (Date)

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