

TECHNICAL AND REGULATORY NEWS No. 04/2016 – Technical

NEW REQUIREMENTS FOR PANAMA CANAL TRANSIT

Relevant for ship owners/managers, shipyards, design offices and suppliers.

February 2016

DNV GL is receiving an increasing number of requests regarding the modification requirements for vessels with a length of more than 294.13m or breadth of more than 32.31m intending to transit the Panama Canal through the new extended locks. This newsletter provides guidance on how to fulfil the latest Panama Canal requirements in this regard.



Regulatory background

The Panama Canal authority regularly issues Notices to Shipping with requirements for Panama Canal transit. Latest valid regulations are given in OP Notice to Shipping No. N-1-2016 vessel requirements. A link to download this document can be found in references below.

The installation of towing and mooring equipment is regulated by our rules. Depending on the class notation of the vessel, these may be:

- DNV Rules for Ships Pt.3 Ch.3 Sec.3 and 5
- GLI Ship Technology Pt.1 Ch.1 Sec.18
- DNVGL RU-Ship Pt.3 Ch.11 Sec.1
- or respective CSR rules

As a minimum requirements, navigational equipment must fulfil:

- SOLAS Ch.V/18 (IMO performance standards)

Documentation requirements

The following drawings must be submitted for evaluation if a vessel is to be modified to meet Panama Canal requirements:

- general arrangement plan indicating deployed boarding facilities, blue steering light and pilot shelters / platforms
- mooring arrangement plan including type and SWL of the intended mooring fittings such as chocks and bollards
- installation drawings of new mooring fittings including supporting structure arrangement below deck
- wheelhouse arrangement
- visibility calculations in accordance with ACP visibility requirements

Mooring equipment

A summarised interpretation of the mooring arrangement requirements defined in ACP Notice to Shipping N-1-2016 is provided in the attached sheet, which illustrates the required number, type and location of chocks and heavy bitts.

Essentially, the chocks and accompanying heavy bitts intended for towing vessels permitted to transit the new locks should be delivered with an increased safe working load (SWL) of 90t (883kN). Of course, the local supporting structures for these fittings have to be designed to transfer the respective design load.

Bridge design (applicable for transit through all locks)

The ship's bridge needs to be equipped with five specific conning positions to be used by pilots during transit and from which certain equipment and indicators have to be accessible and visible.

Visibility (applicable for transit through all locks)

The visibility requirements during canal passage are generally stricter than those defined in SOLAS V/22. On laden vessels, the view of the water surface from the conning positions may not be obscured by more than 1 x LOA forward of the bow. For vessels in ballast, this figure is limited to 1.5 x LOA. Container vessels may under certain conditions exceed the above limits, up to 2 x LOA, max. 500m.

Pilot shelters/platforms (applicable for transit through all locks)

Suitable platforms and shelters must be provided on certain vessels to protect pilots from rain and sun. More details, including examples, can be found in ACP Notice to Shipping N-1-2016 Sec.3.

With the exception of the mooring arrangements, the above requirements are not new, but do apply to all vessels transiting the canal (old or new locks).

Procedure

After class approval, all relevant drawings have to be submitted to the Panama Canal Authority (ACP) for acceptance, as only ACP itself is authorised to confirm compliance.

Vessels intending to use both, old and new canal locks, i.e. old locks in ballast and new locks when laden, should clearly indicate this in their application.

Recommendations

We recommend studying the existing Panama Canal requirements carefully, in particular Sec.30, which describes the required mooring arrangements for transiting the new extended locks. The attached summary sketch may assist in planning vessel retrofitting as well as designing new builds.

References

[OP Notice to Shipping No. N-1-2016](#)
[DNV GL Rules and Standards](#)

Appendix

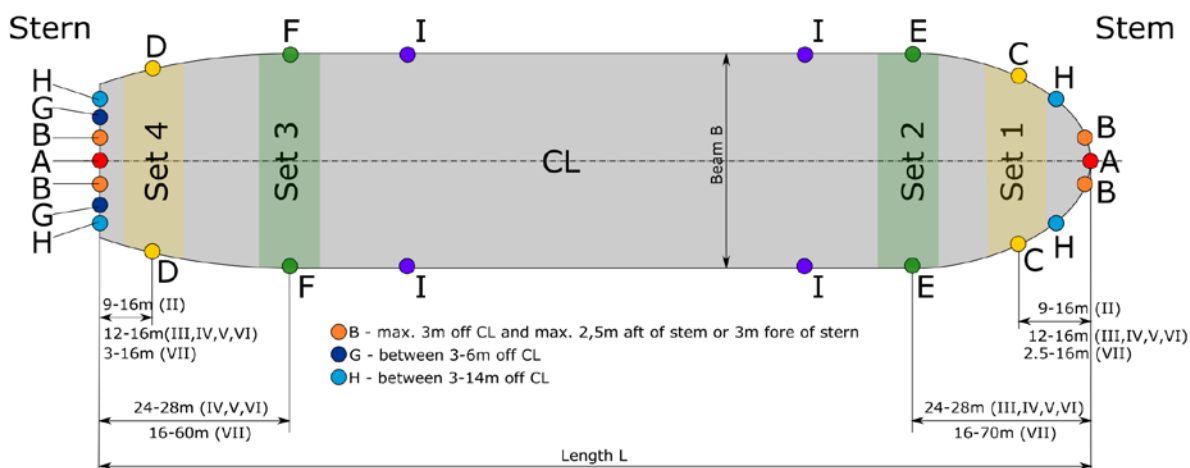
Summary sketch "Mooring arrangement requirements for Panama-Canal transit acc. to ACP notice N-1-2016" on the following page.

CONTACT

Find the contact details of your nearest maritime DNV GL office via [our office locator](#).

As a DNV GL customer you can directly submit any questions through our DATE service (Direct Access to Technical Experts) via [My DNV GL](#).

Appendix

Mooring arrangement requirements for Panama-Canal transit
acc. to ACP notice N-1-2016

Range	Required chocks for vessels of	A or B	C	D	E	F	G	H	I
I	L < 60.96m & Beam < 15.24m	d	s						
II	60,96m < L < 121.92m & B < 22.86m	d	s	s	s				
III	121,92m < L < 173.74m & B < 22.86m	d	s	d	s	s			
IV	173,74m < L < 274,32m & B > 22.86m	d	d	d	d	s	s		
V	274,32m < L < 294.13m & B < 32.31m	d	d	d	d ¹	s	s		
VI	Add. to above for B > 27.73m							s	
VII	L > 294.13m or B > 32.31m	d	d	d	d ¹	d ²	d ²		d ² d ^{2,3}
d = double chock with min. SWL 64t s = single chock with min. SWL 45.36t 1) Min. 13m above max. Panama Fresh water draft 2) Min. SWL 90t 3) Additional closed chocks / recessed bits for vessels with large bow flare, pronounced counters or unusually high freeboard									
A to be accompanied by two pairs of heavy bitts B to be accompanied by one pair of heavy bitts for each chock (double bollards) with min. SWL 64t									
C D E F H & d to be accompanied by one pair of heavy bitts (double bollard) with min. SWL 64t or 90t respectively									
C D E F G & s to be accompanied each by one bitt (single bollard) with min. SWL 45.36t									