

### 30. Vessel Requirements for the New Panama Canal Locks

The following limitations and requirements will be applicable to all vessels intending to transit the new locks of the Panama Canal. Please note that the other requirements listed in this Notice are also applicable to all vessels except for those modified in the following paragraphs.

#### *(1) Maximum Length:*

- The maximum length overall, including the bulbous bow, for commercial or non-commercial vessels acceptable for regular transit is 1200.48 feet (366 meters). Vessels transiting the Canal for the first time, whether newly-constructed or recently modified, are subject to inspection and prior review and approval of vessel plans. Vessels not receiving advance approval and/or not in compliance with Canal requirements may experience delays or denial of transit.

- The maximum length for an integrated tug-barge (ITB) combination acceptable for regular transit is 1200.48 feet (366 meters) overall, including the tug. A tug-barge combination must transit together as one unit with the tug supplying propelling power.

- The maximum aggregate overall length for non-self-propelled vessels acceptable for transit is 1000.4 feet (305 meters), including accompanying tugs. Accompanying tugs must lock through with the non-self-propelled vessel. One time only transits that exceed these limitations may be permitted on a case-by-case basis with prior approval of the Executive Manager for Transit Operations, and subject to requirements listed in Paragraph 2.k (9) of this Notice.

#### *(2) Maximum Beam:*

- The maximum beam for commercial or non-commercial vessels and the integrated tug-barge combination acceptable for regular transit is 160.72 feet (49 meters), measured at the outer surface of the shell plate, including all protruding structures below the top of the lock walls.

- The maximum beam for non-self-propelled vessels, other than integrated tug-barge combinations, acceptable for transit is 119.72 feet (36.5 meters). One time transit of wider vessels may be permitted with prior approval of the Executive Manager for Transit Operations, and subject to requirements listed in Paragraph 2.k (9) of this Notice.

- Vessels that carry cargo within 1 inch (2.5 centimeters) or less of the extreme beam must have approved provisions, such as rubbing bands to protect the cargo, should the vessel rest alongside the wall while in the chamber. The maximum beam of 160.72 feet (49 meters) must not be exceeded by the cargo protection method.

#### *(3) Protrusions:*

- Anything that extends beyond a vessel's hull, except for the main anchors, shall be considered a protrusion and subject to all applicable regulations and limitations.

- The ACP is not responsible for damages to protrusions, whether permanent or temporary.

- Vessels with protrusions may be permitted to transit provided that such protrusions will not interfere with the safe transit of the vessel or present a hazard to Canal structures and appurtenances, as determined by the Executive Manager for Transit Operations. Before transit is permitted, the master of the vessel will be required to complete a form "Undertaking to Release and Indemnify" to exonerate and indemnify the ACP from liability in case of an accident or damages sustained to or as a result of these protrusions.

- Vessels with permanent protrusions must, prior to proceeding to the Canal, furnish detailed information regarding the protrusion(s), including plans, and request authorization for transit. Advance information will minimize the possibility of delays or denial of transit. For detailed information, contact the Executive Manager for Transit Operations.

- Vessels with protrusions extending beyond the maximum length and beam limitations specified in the previous sections of this advisory may, on a case-by-case basis, be permitted to transit, provided that approval is obtained in advance from the Executive Manager for Transit Operations and that those protrusions do not present a hazard or interfere with lock structures, equipment and/or operation, and the master completes a form releasing the ACP from liability, as indicated in Subsection 2.h of this Notice.

- Protrusions, cargo or extensions beyond the ship's side located 55.268 feet (16.85 meters) or less above the waterline are not acceptable; however, extensions up to 13.12 feet (4 meters) beyond the hull and higher than 55.268 feet (16.85 meters) from the waterline will be reviewed on a case-by-case basis to verify the minimum clearance of 3.33 feet (1000 mm) from all equipment above the lock walls (such as valve stems, bits, etc.). Protrusions of up to 5 meters located higher than 75.01 feet (22.87 meters) or up to 21.32 feet (6.5 meters) and located higher than 83.44 feet (25.44 meters) over the waterline, will also be reviewed on a case-by-case basis to verify the minimum clearance is provided from all equipment (such as light posts, valve stems). See Annex 3.

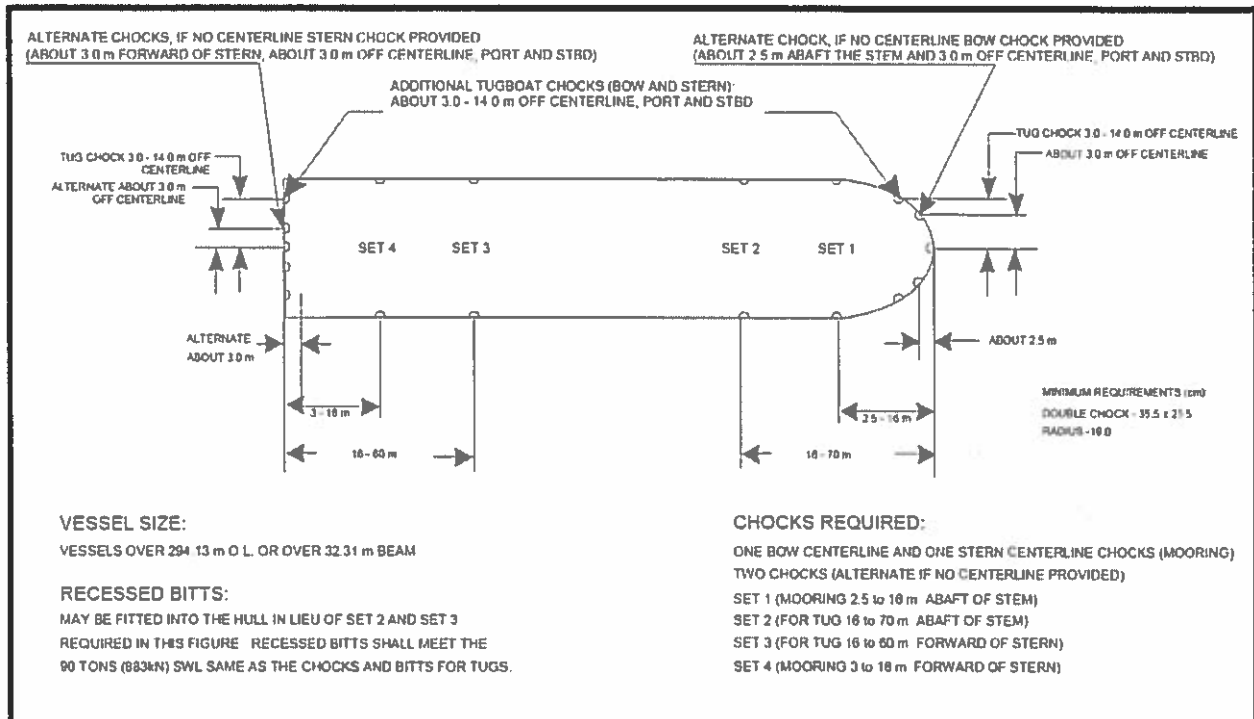
**(4) Draft:**

The maximum permissible draft for transits has been set at 49.87 feet (15.20 meters), TFW at a Gatun Lake level of 85 feet (25.91 meters) or higher. Gatun Lake density is 0.9954 tons/m<sup>3</sup> at 29.4 °C. This provides a safe navigational margin of at least 5 feet (1.52 meters) over critical elevations in the navigational channels and a clearance over the lock sills of 10 feet (3.05 meters).

**(5) Construction, Number, and Location of Chocks and Bits:**

(a) Mooring requirements, as stated in Subsection 8.a of this Notice, will remain unchanged for *Panamax* vessels. For *Panamax Plus* and *Neopanamax* vessels, mooring requirements will be as stated in the updated Notice except as required herein. Namely, the chocks and bits will be used by ACP tugs assisting vessels through the new locks, as well as for mooring vessels inside the locks. Vessels over 965 feet (294.13 meters) long or over 106 feet (32.31 meters) in beam shall have a double chock (mooring) at the stem, and stern or two double chocks (mooring) at the bow and stern, port and starboard, not more

than 8.2 feet (2.5 meters) abaft the stem or 9.84 feet (3 meters) forward of the stern and not more than 9.84 feet (3 meters) off the center line. In addition, these vessels shall have double chocks (mooring), port and starboard, 8.2 to 52.48 feet (2.5 to 16 meters) abaft the stem and 9.84 to 52.48 feet) 3 to 16 meters forward of the stern, SET1 and SET4, respectively. (See the figure below.)



(b) All chocks for the *Panamax Plus* and *Neopanamax* vessels shall be double chocks and shall have a throat opening area of not less than 900 square centimeters (preferred dimensions are 1.18 x 0.85 feet / 355 x 255 millimeters) and shall be capable of withstanding a SWL of 90 tons (883kN) in towing operations and a minimum SWL of 64 tons (628 kN) in mooring operations from any direction, in accordance with Paragraph 8.a (5) of this Notice.

(c) *Neopanamax* and *Panamax Plus* vessels shall have additional tugboat chocks fitted at the bow and stern about 9.84 - 45.92 feet (3.0 - 14.0 meters) off centerline, port and starboard sides. Each of these double chocks shall be served by one pair of accompanying heavy bitts with a preferred diameter of 1.66 feet (500 millimeters), and each bitt shall be capable of withstanding the stress caused by a SWL of 90 tons (883kN). All other towing chock locations, namely SET2 and SET3, will also require one pair of heavy bitts with each bitt capable of withstanding a SWL of 90 tons (883kN). The rest of the chock locations for use in mooring operations shall be accompanied by one pair of heavy bitts meeting the minimum SWL of 64 tons (628 kN).

(d) Vessels with large flared bows, pronounced counters or unusually high freeboards, such as LNG carriers, container vessels, cruise vessels or vehicle carriers, will be required to provide closed chocks located further aft/forward, respectively, than those required for SET2/SET3 above and in Paragraph 8.a (12) of this Notice, for correct positioning of assisting tugs. These vessels may be required to fit recessed tug bollards into the hull in lieu of the chocks detailed in this paragraph so that tugs can work without coming in contact with the flare or counter and without requiring extra-long lines and/or inefficient leads. Recessed bits shall meet the 90 tons (883kN) SWL required above.

(e) All vessels wishing to transit the new locks will be required to have mooring winches in operation and fitted with manila or synthetic mooring lines before every transit to be used during mooring operations at the new locks. Noting that "Wire ropes and ropes composed of both wire and fiber or filaments, are not acceptable for Canal operations and shall not be used," as indicated in the last sentence of paragraph 9.a; and that, similar to the ACP current practice for temporarily mooring of vessels inside the chambers during relay operations in the actual locks, the normal procedure in the new locks will be to use the manila or synthetic mooring lines from the vessel's winch drums. The mooring fittings that will be used for mooring at the locks will be the chocks located at the bow/stern centerline or alternate, SET1 and SET4.

(f) The use of existing roller chocks (open type) on vessels will be evaluated for approval during transit, upon request, on a case-by-case basis, provided they are located not less than 53.267 feet (16.24 meters) above the waterline at the vessel's maximum Panama Canal draft, are in good condition, meet all requirements for closed chocks, as specified above, and are fitted so that the transition from the rollers to the body of the chock prevents damage to the mooring lines. The equivalency of the proposed closed roller chocks shall be submitted for review and acceptance by the ACP.

(g) Similar equivalency may be requested for existing universal roller fairleads (closed type) located below the 16.24m height, providing the transition from the rollers to the outer frame of the fairlead at side is shown to prevent damage to the mooring lines in upward directions, as well as downward, with structure built at the top similar to that at the bottom, giving the ropes a safe surface on which to chafe and grind under all directions of load. The universal roller fairlead/supporting structure as a unit are to be certified as complying with 64 tons SWL in all directions.

(h) Alternatively, mooring arrangements have been found acceptable showing the use of stand rollers and/or double bollards to redirect the lines from the winch drums to the double chocks (mooring).

Vessels not in compliance with the requirements established in this Notice to Shipping shall be evaluated in order to determine under what conditions, if any, they may be allowed to transit or dock. Vessels that require additional resources due to non-compliance or other deficiencies will be assessed the corresponding charges.