

Working Group of Pilotage Advisory Committee

PAC WG Paper No. 03/2002

Tidal Windows for Ma Wan Passage

Purpose

The purpose of this paper is to seek members' endorsement on revising the existing criteria for determining the transit window for Ma Wan passage, by making direct reference to the predicted speed of tidal currents instead of the tidal heights.

Background

2. According to the existing Berthing Guidelines, vessels transiting Ma Wan are subject to a tidal window, which is dependent on the type and size of a vessel. At present the window for passage is determined based on the time of HW/LW at Ma Wan (e.g. HW + 1 hour to HW + 3 hours and LW - 1 hour to LW + 1.5 hours etc.). This method, while taking in consideration the period of slack tide, does not truly reflect the actual strength of the current, which may vary throughout the year (e.g. spring and neap). The reason for adopting such a method in the past was due to the lack of a reliable means for prediction of the tidal current at Ma Wan.

Latest Development

3. Following extensive researches the Hydrographic Office has recently developed a mathematical model which can provide reasonably accurate prediction of the tidal current at selected locations around the Ma Wan area.

Proposal

4. Given the availability now of a means for prediction of the tidal current, it is proposed that the existing criteria for determining the window for transiting Ma Wan be revised to base on the predicted strength of the tidal current. As a start, these will apply to container ship and passenger ship of any length, and tanker/bulk carriers up to 230m LOA. Details of the proposal are as follows:

- (a) For container/passenger vessels -
 - (i) against the current : not more than 3 knots
 - (ii) going with the current : not more than 2 knots

- (b) For tankers/bulk carriers up to 230m LOA -
 - (i) going against the current : not more than 2.5 knots
 - (ii) going with the current : not more than 1.5 knots

- (c) The tidal window for tankers/bulk carriers over 230m LOA will remain to be determined by the existing method subject to review later.

- (d) The present restrictions for nighttime transit for vessels of different lengths and drafts will remain subject to further adjustment.

Implications

5. Based on a very preliminary assessment it is expected that the transit window for various classes of vessels will generally be extended using the new criteria. A rough indication is given below:

Tidal window for Ma Wan transit – Tankers and Bulk Carriers

Length	Existing Berthing Guidelines		Proposed Criteria	
	North Bound	South Bound	North Bound	South Bound
153m	24 hours	24 hours	24 hours	24 hours
183m	24 hours*	24 hours*	24 hours*#	24 hours*#
198m	4.5 hours**	4 Hours**	9 hours#	9 hours#
230m	0.5 hours**	2 hours**	9 hours#	9 hours#

Tidal window for Ma Wan transit – Container and Passenger ships

LOA (m)	Existing Berthing Guidelines		Proposed Guidelines	
	North Bound	South Bound	North Bound	South Bound
153m	24 hours	24 hours	24 hours	24 hours
183m	24 hours*	24 hours*	24 hours*#	24 hours*#
198m	12 hours**	14 hours**	21 hours#	18 hours#
250m	10 hours**	10 hours**	21 hours#	18 hours#
300m	6 hours**	8 hours**	21 hours#	18 hours#

- Remarks: * subject to draft.
** according to existing guidelines. In practice the duration may be longer subject to discretion of the pilot.
based on predictions of tidal current over the past year.

Recommendation

6. Members are recommended to endorse the proposal described in para 4 above. Subject to members' endorsement a revised berthing guidelines will be circulated for members' further consideration. Actions will also be taken with the Hydrographic Office concerning the dissemination of information on the predicted tidal current at Ma Wan.

Presentation

7. Mr C K Yeung of Marine Department will present this paper.

Marine Department
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