

Marine meteorological services for ships – Tidal information

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With the growing of the maritime industry, ships are getting larger, drawing more water and pushing channel depth limits to derive benefits from every last inch of draft^[Note], so as to increase the amount of cargo moved through a port and harbour.



Figure 1 Draft marks on a ship's bow

In order to anticipate early or late transit, plotting a graph of the tidal range for the 24-hour period centered on the scheduled time of arrival or departure is crucial to the vessel's navigation as well as channel passage. Depending on the draft and the harbour's depth, some vessels may be able to transit only at high tide and tide information is critical for their operation. Shipmasters can use the predicted tide together with the up-to-date nautical charts and precise positioning information to plan in advance for any potential effects in the vicinity of navigational hazards. The Observatory predicts the astronomical tide in Hong Kong and publishes the "Tide Tables for Hong Kong" every year. The tidal predictions are also made available on the internet at http://www.hko.gov.hk/tide/estation_select.htm.

However, shipmasters should note that the actual and predicted tide levels may be different due to weather or other natural phenomena and should therefore check the measured tide levels to understand the prevailing condition. The Hong Kong Observatory measures the tidal levels that mariners need to navigate safely. The real-time tidal information for various locations in Hong Kong water can be found from the website of Hong Kong Observatory (<http://www.hko.gov.hk/tide/marine/hko.htm>).



Figure 2 Monitoring of the water depth from a sea-going vessel

Note : Draft is the vertical distance from the bottom of the keel to the waterline, which is a significant factor limiting navigable waterways, especially for large vessels.