



Marine Notice 17/2011

Under Keel Clearance Management (UKCM) system declared operational in Torres Strait

Background

On 16 December 2011 AMSA declared an Under Keel Clearance Management (UKCM) system for Torres Strait as 'operational'. The UKCM system contributes to protecting the marine environment and enhancing the safety and efficiency of deep draught vessels transiting Torres Strait.

The Torres Strait lies between Papua New Guinea and the northern tip of the Australian continent and is a vital shipping route for the Asia-Pacific region. Numerous large vessels transit Torres Strait and face many challenges to safe navigation due to the numerous reefs, shallow waters, complex tides and strong tidal streams.

UKCM System

The UKCM system is specifically designed to complement other measures to protect the marine environment and to deliver enhanced safety and efficiency of navigation in Torres Strait and the Great Barrier Reef. Additionally, the system will:

- validate the existing under keel safety margin for deep draught vessels; and
- help evaluate the appropriateness of the draught limit regime.

The UKCM system is web-based and uses accurate vessel information, hydrodynamic modelling and environmental data from tide, stream, wind and wave sensors to estimate a vessel's UKC. Use of the UKCM system helps to ensure compliance with AMSA's UKC safety margin specified in Provision 94 of Marine Order 54.

The system provides outputs based on historic and predicted data as well as real-time data obtained

from met-ocean sensors, vessel AIS transmissions, official bathymetry and vessel stability information. The UKCM system is provided by AMSA as a specific aid to navigation for deep draught transits of Torres Strait.

Operational Status

The operational status of the UKCM system means that vessel operators, masters and watchkeepers, pilotage providers and coastal pilots are able to use the system to:

- assess loading scenarios for deep draught vessels,
- optimise the scheduling of deep draught transits and pilot transfers, and
- improve the safety and efficiency of deep draught transits.

As a general principle, mariners are to use all available means to navigate safely and therefore, as an aid to navigation, the UKCM system can provide relevant information and may be used for planning deep draught transits through Torres Strait. Based on monitoring of the UKCM system over the course of system trials, AMSA recommends use of the UKCM system for all vessels with a draught of nine metres or more. Circumstances may warrant use of the UKCM system for vessels of lesser draught.

AMSA considers the use of the system to be an effective way of minimising UKC risks and, when integrated into a pilotage provider's safety management system, is considered by AMSA to satisfy the UKC aspects of the safety management system required by Marine Orders 54.

Precautions have been taken to ensure that the information in, and generated by, the UKCM system is accurate. However, the responsibility for safe navigation continues to reside with mariners (masters and pilots) through the appropriate use of the system in conjunction with other aids to navigation, official hydrographic products and prudent seamanship, which includes voyage planning as defined in IMO Resolutions. AMSA accepts no liability arising from misuse of the system or misinterpretation of information provided or generated.

Access to the UKCM system is available for approved users through a vetted registration process. To request registration, please follow the registration application process available at <https://ukcm.amsa.gov.au>

Summary

The UKCM system is one of a number of protective measures implemented by AMSA to enhance the safety of shipping in Torres Strait and the Great Barrier Reef. Complementing the system of pilotage and the recent extension to REEFVTS coverage, the UKCM system provides a modern aid to navigation that seamlessly links complex shore-based calculations with ship-based operations.

Mick Kinley
A/g Chief Executive Officer
16 December 2011

Australian Maritime Safety Authority
GPO Box 2181
CANBERRA ACT 2601

File No: 2011/2721