

GUIDANCE NOTE 03/2016 (Rev 1)

ECDIS AS THE PRIMARY MEANS OF NAVIGATION

To: OWNERS, MANAGERS AND MASTERS OF CAYMAN ISLANDS SHIPS

This Guidance Note should be read in conjunction with Shipping Notice 03/2015 Rev 1 "ECDIS on Cayman Islands Ships and Yachts".

1. Introduction

The Australian Maritime Safety Authority (AMSA) has recently raised safety concerns relating to the use of ECDIS as the primary means of navigation and passage planning. This has led to a number of Port State Control actions including 8 detentions. The purpose of this Guidance Note is to alert ship owners, managers and masters to the issues encountered by AMSA.

2. The issues and concerns highlighted by AMSA

During Port State Control Inspections AMSA have noted the following deficiencies and shortcomings relating to the use of ECDIS on board ships:

- Safety management systems providing detailed instructions for passage planning and route monitoring using **paper charts**, but not taking into account that ECDIS was the primary means of navigation;
- Passage planning being carried out on ECDIS using only small scale Electronic Navigational Charts (ENC) and no route checking being carried out. As a result, there have been numerous instances of planned routes transiting through areas to be avoided, passing perilously close to shoals/coastlines, passing through traffic separation schemes in the wrong direction and other dangerous planned routes;
- An inability of ships' navigating officers to perform basic squat and under keel clearance calculations to determine safety depths and inappropriate setup of safety settings. For example, during one inspection it was found that the safety depth had been set and locked at 10m, when the departure draught of the vessel was 14.5m;
- ECDIS settings being "locked out" to prevent changes being made, combined with inappropriate safety settings being used;

- A complete reliance on Global Navigation Satellite System (GNSS) as the sole source of positioning information, and no use of alternate methods to verify the ship's position, even on coastal voyages when in sight of land;
- Ships' navigating officers unable to demonstrate calculation of compass error by taking bearings of the sun or other celestial bodies;
- Ineffective voyage planning. Including examples where there was a failure to observe the requirements of designated shipping areas, areas to be avoided and traffic separation schemes;
- The use of inappropriate, uncorrected and/or outdated nautical charts including ENCs;
- The use of unofficial and small-scale charts that are inconsistent with SOLAS regulations V/27 and 34.1 as well as IMO resolution A.893 (21);
- The disabling of ECDIS audible alarms or not ensuring the ECDIS audible alarm is operational at the commencement of a voyage; and
- Limited understating of the capabilities and limitations of the electronic navigation equipment being used and the nature of the information provided on displays. This includes errors in "mode awareness" where data is relied upon inappropriately (for example, dead reckoning positions being read and used as GPS (Global Positioning System) calculated positions).

In addition, AMSA has made the following observations relating to general navigational practices being encountered during Port State Control inspections:

- There appears to be a growing over-reliance on electronic planning tools, without the competence to employ these systems effectively. The design of equipment can also contribute to over-reliance and lead to vigilance problems;
- When monitoring a voyage, there is a growing prevalence to ignore visual and radar information. Ship's officers are sometimes not corroborating visual and radar information to confirm their vessel's position. This again appears to be a result of over-reliance on electronic aids and it could lead to unrecoverable errors and incidents;
- Guidance on type specific training may be inadequate to ensure that seafarers are effectively trained in the use of equipment.

3 Port State Control Inspections relating to ECDIS use

During a Port State Control inspection, both the master and the navigating officers will be expected to demonstrate the basic functionality and operations of the ECDIS equipment fitted on board. As part of this demonstration, officers will be asked to verify –

The validity of ENC permits, presentation library and latest updates; and

That passage planning, route checking and appropriate safety settings, such as safety depth, safety contour, look ahead time and angle, under keel clearance, ability to record bearings and position fixing are all properly executed.

The PSCO may also examine the ship's safety management system to confirm that procedures for operation of ECDIS are incorporated into the system and that these procedures are appropriate, effective and being followed.

4 Recommended actions

Ship owners and managers are recommended to verify that the use of ECDIS is properly reflected in the procedures of the safety management system and that these procedures are being followed on board. Particular emphasis should be made on the use of ECDIS in passage planning and voyage monitoring.

Owners and managers should also ensure that the master and all navigating officers are fully conversant with the ECDIS equipment in use and are able to demonstrate this competency when requested.

These recommendations are not made for the purposes of "passing" any PSC inspection, but rather for safe navigational practices to ensure the safety of crews, ships, cargoes and the environment.