REPUBLIC OF THE MARSHALL ISLANDS

MARITIME ADMINISTRATOR

Marine Guideline

No. 7-41-1

Rev. Apr/2023

TO: **ALL SHIPOWNERS, OPERATORS, MASTERS AND OFFICERS OF MERCHANT SHIPS, AND RECOGNIZED ORGANIZATIONS**

SUBJECT: **Safety of Navigation**

References:
(a) **COLREG,** *Convention on the International Regulations for Preventing Collisions at Sea, 1972,* Consolidated Edition 2003
(b) **SOLAS**, *International Convention for the Safety of Life at Sea,* Consolidated Edition 2020
(c) **STCW including 2010 Manila Amendments:** *STCW Convention and STCW Code: International Convention on Standards of Training, Certification and Watchkeeping for Seafarers,* 2017 Edition
(d) **IMO Circular** MSC.1/Circ.1503/Rev.2, *ECDIS – guidance for good practice*, issued 28 November 2022
(e) **RMI Requirements for Seafarer Certification**, MI-118
(f) **RMI Marine Notice** 7-038-4, *Principles of Watchkeeping*
(g) **RMI Marine Notice** 7-041-6, *Nautical Chart and Publication Carriage and Electronic Chart Display and Information System (ECDIS) Requirements*

PURPOSE

This Guideline from the Republic of the Marshall Islands (RMI) Maritime Administrator (the "Administrator") reminds watchkeepers of the operational factors affecting safe navigation and the performance and accuracy of navigational equipment required by SOLAS. It addresses Electronic Chart Display Information Systems (ECDIS), navigation chart corrections, speed input to automatic radar plotting aids (ARPA)-equipped radars, and traffic separation lanes.

This Guideline supersedes Rev. Jul/2022 and has been amended to include a revised IMO Circular MSC.1/Circ.1503/Rev.2, *The ECDIS – guidance for good practice*.

APPLICABILITY

This Guideline applies to:

- All ships fitted with shipborne navigational systems and equipment, including ECDIS and automatic radar plotting aid (ARPA)-equipped radar.

- Those ships which under SOLAS V/27 must have adequate and up-to-date nautical charts and nautical publications[1] (such as sailing directions, lists of lights, notices to mariners, and tide tables) for the intended voyage.

GUIDELINES

1.0 Information Services for Safety of Navigation

1.1 Nautical Chart Services

.1 Nautical chart services may be used to obtain, correct, or update nautical charts. These services provide navigational products in digital or printed format.

.2 To ensure safe and secure transmission and delivery, chart information from a service should be standardized:

a. in format;

b. for data authentication; and

c. for distribution methods.

.3 Nautical charts may be obtained from National Hydrographic Authorities or their authorized chart services.

1.2 Nautical Publications Services

.1 Nautical publications services may be used to obtain, correct, and use digital or printed nautical publications.

.2 Nautical publications include nautical charts, and information on ports and navigational aids, both ashore and at sea. They also contain contact information of authorities and services for a sea area or port, such as sailing directions, light lists, notices to mariners, tide tables and other nautical publications.

.3 Updates and corrections to nautical publications may be received electronically without any delays in delivery. Other distribution methods can be time-consuming and may introduce risks.

1. Refer to SOLAS V/2 for the definition of **nautical chart** or **nautical publication**.

1.3 Maritime Safety Information Services

Services (e.g., NAVTEX, SafetyNET services, or Notices to Mariners) used to obtain information on navigational warnings and meteorological forecasts and warnings should be applied for the voyage.

2.0 Navigational Chart Correction and Use

2.1 Watchkeepers should take notice of these items:

.1 As required by SOLAS V/27, electronic navigation charts (ENCs) used must be up to date. The Administrator recommends that they conform to the latest applicable International Hydrographic Organization (IHO) standards in force.

.2 The IHO offers an online catalog of charts for the world's seas, oceans, and navigable waters.

.3 The IHO provides coastal State information on the use of paper charts and on ECDIS used in the Raster Chart Display Mode when ENCs are unavailable.

.4 Users of ECDIS planning and executing a voyage should consult the IHO Information Papers on the safety implications of using ENC data beyond its intended use. Topics covered include:

a. ENC generalization;

b. over-scaling; and

c. safety checking functions.

.5 Even charts based on recent surveys may not show all seabed obstructions or the shallowest depths. For example:

a. Hydrographic surveys have inherent technical limitations in some offshore areas, partly due to difficulties in accurately calculating tidal ranges.

b. In some areas the seabed depth constantly changes.

c. Charted depths or soundings may not be accurate as they may be based on surveys taken many years ago.

d. Always consider that wind conditions and other factors may cause negative tidal surges, which are not reflected in the previously consulted tide surge prediction tables and tidal stream atlases.

2.2 If a competent authority determines during an inspection that the charts or publications are inadequate, or there is not an efficient correction procedure, the Administrator may prevent the ship from proceeding to sea until appropriate action is taken to correct the situation. Refer to IMO Resolution A.1155(32), *Procedures for port State control, 2021*.

3.0 Navigational systems and equipment factors affecting performance and accuracy

3.1 Companies and Masters have a responsibility[2] to ensure that all seafarers become familiar with the shipboard equipment, operating procedures, and other arrangements[3] needed for the proper performance of their duties, before being assigned to those tasks.

3.2 Administrator guidance on bridge equipment is provided in the following sub-sections:

.1 ARPA Function

a. SOLAS Chapter V Regulation 19.2.8 requires that speed input of ARPA-equipped ships must indicate speed and distance through the water.

b. Inputs providing speed over the ground must not be used for collision avoidance decisions, since doing so may lead to dangerous navigation or erroneous collision avoidance situations.

.2 Gyrocompasses

a. Gyrocompass inputs must be checked. The selection of a different Transmitting Heading Device[4] (magnetic type transmitting compass) could affect accuracy of other connected equipment. Unlike a magnetic compass, the gyrocompass is not influenced by an external magnetic field.

b. Ships in Arctic and Antarctic waters must be fitted with two non-magnetic means to determine and display their heading.

c. Ships proceeding to latitudes over 80 degrees must be fitted with at least one Global Navigation Satellite System compass or equivalent, in accordance with the Polar Code, Part I-A, §9.3.2.

.3 ECDIS

a. Officers in charge of a navigational watch serving onboard RMI-flagged vessels equipped with an approved ECDIS must have received training.

b. Refer to MI-118 and MN 7-041-6, §3.1 and §3.2. The precautions in this Marine Notice also apply when starting, setting up, and applying data in an ECDIS. See also IMO Circular MSC.1/Circ.1503/Rev.2.

2. STCW Code, Part A, §A-I/14.
3. See MN 7-038-4.
4. See MSC.116(73), Annex §4.3.2.

4.0 Routing Measures and Watchkeepers Duties

4.1 Routing measures are intended to contribute to the safety of navigation and marine environment protection. They include traffic separation schemes, separation zones, deep water routes, areas to be avoided, and mandatory ship report systems.

4.2 COLREG Rule 15, *Crossing Situation*, applies equally to vessels navigating in, near, and outside Traffic Separation Lanes and narrow channels and fairways.

4.3 Based on the Administrator's analysis of investigations, Masters and officers in charge of a navigational watch should:

.1 ensure the composition of the watch is made up of appropriately qualified and rested watchkeepers and that it is at all times sufficient, effective, and efficient given the prevailing circumstances and conditions;

.2 see that ongoing training is undertaken, verified, and tested regularly to ensure compliance. Masters are advised to raise and maintain the standards of all watchkeepers;

.3 ensure that the ship's navigational plan is planned in adequate detail with contingency plans where appropriate;

.4 ensure all crewmembers with responsibilities related to the navigating the ship understand their duty to maintain the safety of navigation and protection of the marine environment;

.5 closely and continuously monitor the ship's position ensuring as far as possible that different means of determining position are used to check against error in any one system;

.6 cross check individual decisions so that errors can be detected and corrected as early as possible;

.7 ensure that optimum and systematic use is made of all information from all available sources;

.8 ensure that the intentions of a Pilot are fully understood and acceptable to the bridge watchkeeping team;

.9 know that vigilance of the officer in charge of a navigational watch is the most direct means of avoiding dangerous situations from developing, this includes:

a. using a proper lookout to fully appraise the situation and the risk of collision;

b. calling the Master if in any doubt;

c. application of COLREGS;

d. understanding the ship's limitations with respect to maneuverability;

e. executing the navigational plan with respect to available depth and width of navigable water, specifically the effect of squat and continuous management of under keel clearance; and

f. complying with all IMO routing measures and reporting systems.

.10 the Master and officer in charge of a navigational watch must take all possible and necessary precautions to prevent damaging the marine environment.