



Office of
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of Maritime Affairs

THE REPUBLIC OF LIBERIA

LIBERIA MARITIME AUTHORITY

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Marine Advisory: 38/2024

Subject: Rudder Angle Indicator Systems

Reference: (a) SOLAS Chapter II-1, Regulation 29.11 & Chapter V, Regulation 19.2.5.4

To: Shipowners/Operators/Recognized Organizations/Masters/Crew:

Purpose

The purpose of this Marine Advisory is to draw the attention of shipowners, operators, recognized organizations, masters and crew to be aware of the alternative way to determine the angular position of the rudder in case of a failure to the Rudder Angle Indicator System (RAIS).

Background

The Australian Transport Safety Bureau (ATSB) report on the grounding of a Liberian registered ship identified that the tracking motor of the omnidirectional rudder angle indicator burned out, causing a short circuit. This short circuit tripped the common circuit breaker in the bridge cabinet causing all rudder angle indicators in the wheelhouse, steering gear and engine room to lose power and stopped functioning at the time of the incident.

It should be noted that while the steering and rudder angle indicator systems complied with the applicable rules and regulations, neither the SOLAS regulations, nor the rules of the ship's responsible classification society, mandated protection of the ship's rudder angle indication systems against a single point of failure in power supply, nor did they require installation of audible or visual alerts to notify the bridge team of a power failure affecting the indicators.

Following this incident, the Pilbara Ports Authority (PPA) issued a marine notice requiring that a suitably qualified and competent person stands by in the steering gear room during a ship's transit of the Port Hedland channel. Please refer to [PPA Marine Notice 05/2022](#).

From 1 January 2025, all capesize vessels (nominal deadweight > 120,000) entering and operating within the Port of Port Hedland are to be equipped with a minimum of one (1) Closed-Circuit Television (CCTV) rudder camera installed at the steering gear flat, positioned to clearly capture the rudder angles during maneuvering. Please refer to [Marine Advisory 19/2024](#) for more information.

Recommendation

The Administration recommends shipowners, operators, masters and crew:

1. To be aware of the alternative way to determine the angular position of the rudder in case of a failure to the RAIS, i.e. "angular position of the rudder to be recognizable in the steering gear compartment and by utilizing the means of communication available between the steering gear compartment and the navigating bridge".

2. To ensure that a suitably qualified and competent person is stationed in the steering gear room during navigation in narrow channels.
3. To inform bridge personnel of any other means of indicating rudder angle which is not associated with the main rudder angle indicators, such as one which may be available on the auto pilot console, or other location.

The Administration also recommends that the Company consider modification of the power distribution system to all rudder angle indicators to provide a level of redundancy.



For more information, please contact the Regulations and Standards department at regsandstandards@liscr.com.

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