ENHANCING BRIDGE VISIBILITY

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Bridge visibility, which refers to the unobstructed view the bridge team has from the bridge, is regulated by the SOLAS[1] convention. Good visibility is essential for safe navigation, collision avoidance, and effective decision-making. However, several factors influence bridge visibility, including the ship's design, the height and location of the bridge, and the arrangement of cargo or equipment on deck. These obstructions or blind spots can significantly impede the officer's ability to monitor the surroundings. Additionally, during navigational situations such as overtaking smaller vessels in narrow canals, visual contact can become limited when the smaller ships move along the hull of the overtaking ship in close proximity.

HOW TO REDUCE THE IMPACT OF BLIND SPOTS

COLREGs[2] emphasise the need for a lookout at all times, in all conditions, to ensure safe navigation. Maintaining a proper lookout requires vigilant monitoring of the ship's surroundings by utilising human senses and technological aids. To maintain a proper lookout, the bridge team must be familiar with any blind spots and understand how these affect their visibility and electronic instruments, such as the radar. To ensure an effective lookout, consider the following recommendations, though they are not exhaustive:

Use visual observations – Continuous visual scanning of the horizon and surrounding areas is crucial. Officers should use optical aids to enhance their range of vision.

Technological Aids – Radar, AIS and ECDIS are vital tools. These technologies can provide real-time data on nearby vessels, navigational hazards, and weather conditions, enhancing the officer's situational awareness. However, these instruments also have limitations and blind spots. The bridge team should be fully aware of these and take necessary actions to compensate for them. When permitted, docking radars should be in use both forward and aft. Additionally, new AI or augmented reality equipment may be installed to complement the required bridge equipment and help mitigate blind spots.

Keep moving – To overcome the limitations of visual and radar blind spots, the bridge team members must move around the bridge to maintain a complete view and comply with rule 5 of the COLREGs. When overtaking smaller vessels in narrow canals, blind spots can obscure the smaller ships from the bridge team's view. In such situations, the bridge team should visit the bridge wings to improve situational awareness. Additionally, before altering course, the bridge team should check the bridge wings to ensure there are no obstructions.

Modification and management of change – Consider any changes to the ship's layout. Installing new cargo cranes or wind rotors may impact visibility and should be taken into account. Seek approval from the flag state and classification society for these modifications.

Speed – Adjust speed accordingly as per COLREG rule 6 when passing restricted or dense traffic areas.

Training – Highlight the limitations of wheelhouse visibility as part of new watchkeepers' familiarisation. Continuous training, including simulation exercises, helps officers practice and improve their response to different scenarios.

Bridge Resource Management (BRM) – Effective BRM involves teamwork, communication, and the optimal use of all available resources. It ensures multiple crew members share the responsibility of maintaining a lookout, reducing the likelihood of human error.

Bridge visibility and maintaining a proper lookout are crucial elements of maritime safety. By combining visual observations, advanced technology, regular training, and effective communication, officers can enhance their situational awareness and ensure safe navigation.

[1] SAFETY OF LIVES AT SEA REGULATION V/22
[2] THE INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA