## Human Factor in Collision Incidents

Despite of the developments in navigation and communication equipment today with the advancement in technology, the collision incidents can only be prevented at a certain degree. Such incidents may not only cause physical damage to the boat, but also lead to serious environmental pollution or, more serious, deaths of numerous innocent people. A simple fatigue while holding the shift may result the death of people which is worse than a material damage.



Navigation deficiencies can occur in many areas and when we look at the collision incidents encountered we can categorize them as follows;

- 1 Poor / improper lookout
- 2 Wrong Action to Avoid Collision

Regarding the collision incidents at sea, it is generally seen that the officer in charge fails to evaluate the risk of collision in advance or that the actions to avoid the collision are wrong even if he sees the risk of collision. In fact, poor lookout also delays the timely adoption of appropriate measures.

### Improper Lookout

Lookout is the most important factor in preventing collision risk and predicting the collision beforehand.

# COLREG (International Convention for the Prevention of Collision at Sea) Rule 5 - (Lookout)

"Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and or the risk of collision."

Lookout is the most important factor in preventing collision risk and predicting the collision beforehand.

#### Timing - Early Detection

When proper lookout is performed, the presence of vessels in the vicinity may be informed in advance. Collision incidents generally occur when one of the vessels is unable to detect the other vessel or has detected it very shortly before the moment of the collision.



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COLREG (International Convention for the Prevention of Collision at Sea) Rule 7 - (Risk of collision)

"Proper use shall be made of radar equipment if fitted and operational, including long-range scanning to obtain early warning of risk of collision and radar plotting or equivalent systematic observations of detected objects."

Considering the radar and AIS technology that can be used any time by the officer in charge onboard vessels equipped with modern devices today, it is unacceptable not to fulfill this rule. In other words, it must be realized very early that another ship will present a risk of collision.

The officer in charge should pay attention to the work he is performing, using his technological equipment and personal experience on the bridge. If he is unable to watch by himself due to weather or other circumstances, he should ask for help from other officers and delegate his duty if necessary.

In general practice, only one officer in charge is present on the bridge, but this should be applied to day shifts. The master should carefully consider each and every situation when deciding that a single person shall be on watch per shift. The master can create a continuous working order by taking into consideration the conditions of shift, weather, sea, day / night situation, regions with high density of traffic, clarity of sight, the presence of elements that may create danger for navigating the route, functional condition of the bridge equipment, passing through narrow waters etc. It is required not to assign any task other than lookout to the officer in charge and if such assignment is made, to inform the crew member that will assist the officer in charge and the crew member in the main shift. Because, in case of an emergency, the reserve personnel must adjust the conditions so that they are always ready for the bridge duty.

Timing - Determining the Risk of Collision

Time is vital. If the presence of another vessel is detected early, it will allow an early assessment of the risk of collision. By early detection of the situation we mean, the angle at which the opposite vessel will cross, and the determination of the positions and movements of other vessels if it is a region with heavy traffic. In this way, it can be determined which vessel is chasing and which vessel clears the way. In the convention on preventing collision, the actions that vessels should take depending on whether they are approaching or giving way are clearly linked to a rule. Every vessel should be able to determine its own situation in this way and communicate with the other vessel directly.

### Action for Preventing Collision

Even when there is a risk of collision while trying to reach the port of loading or discharge, it is often not desirable to slow down. When the officers in charge of both vessels wait for the opposite ship to slow down, there will not be enough time for each other to do an avoiding action.

COLREG (International Convention for the Prevention of Collision at Sea) Rule 8 - (Risk of collision)

" (e) If necessary to avoid collision or allow more time to assess the situation, a vessel may slacken her speed or take all way off by stopping or reversing her means of propulsion."

Although very strict rules apply to the training and qualification of seafarers, seafarers may panic and forget what to do in such sudden events. Seafarers should become familiar with the tasks they will undertake in case of emergency through continuous drills, and all seafarers must become familiar with the use of life-saving equipment. It should not be neglected to ensure the adaptation of new personnel to the vessel and emergency equipment. In case of damage, the adaptation and adequacy of the personnel is questioned by the insurers.

