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## ***SAFETY CIRCULAR***

***05<sup>th</sup> Feb 2019***

TO: Fleet

Subject: ECDIS Safety Awareness

Dear Masters,

In view of an non-conformity received on board of one of our vessels, where positions were not plotted on the paper chart when approaching her load port; we have made this circular as to bring to your attention that ECDIS is to be used as an additional navigation tool and certainly not as your main navigational equipment!

Please carefully take note of below information and share it with all your navigating officers.

The benefits of integrating additional navigational systems will include providing the mariner with a greater perspective of the navigational picture whilst increasing situational awareness. The navigation officer's work load decreases as information relating to the safe navigation of the ship (for example, depth, speed and course) can be readily viewed on the ECDIS display as well as other important information.

If GPS sensors fail to provide position fixing input to the onboard ECDIS, navigation officers must be fully ready and practiced in carrying out position plotting directly onto the ECDIS using traditional position fixing methods, for example visual bearings, radar ranges, radar bearings and transits.

There is the risk with ECDIS that navigators may become dependent on monitoring and that when a sensor fails, the navigator must return to first principles to deal with the situation. This in turn may lead the navigator to incur additional errors in dealing with the situation known as 'knowledge based errors'. Only through training, in-depth knowledge of ECDIS and its integrated electronic systems and a defined procedure for sensory failure, can the navigator expect to effectively deal with input failures to ECDIS.

## **Advantages over Paper Chart**

ECDIS is not only an adequate replacement for the paper navigational chart but also a system containing all information important for navigation. It reduces the time-consuming manual correction of paper charts.

The ECDIS display can be superimposed with radar images and with the radar targets of ARPA; and the vessel's positions is continuously shown on the chart display and stored at regular intervals. Hence manual chart exchange is no longer required.

The elements of route planning in ECDIS are waypoints and leglines to ensuring safe track keeping. The cross distance along the leglines can be set for activation of the alarm if the vessel deviates from the scope of leglines. ECDIS "knows" whether a vessel can pass safely through an area, on the basis of the vessel's information fed in.

## **The Risks of ECDIS**

*It should be noted that the ECDIS is only a tool that helps a mariner safely and effectively navigate a ship. One of the biggest risks with the transition to ECDIS is an over reliance in the information provided.*

## **Limitation of ECDIS**

There are some limitations of the ECDIS as followings:

### **1. Chart Accuracy**

ECDIS provides the navigator with a tactical tool which incorporates a high accuracy positioning device. The navigator can "zoom" in on an ECDIS chart to a scale beyond the intended accuracy of the charted information.

### **2. Technical limitation of other devices**

The accuracy is also depends on the technical limitation of other devices linked to the ECDIS, such as GPS, radar, etc. The mariner must be attentive to the source and accuracy of the position fixing device utilized by the ECDIS.

### **3. Information Overload**

The mariner is cautioned to be wary of information overload and a much cluttered display screen. Information overload and a cluttered screen seriously degrade navigation safety for the mariner and could result in a "technology-assisted incident".

#### 4. Familiarization of ECDIS

A mariner must invest time and effort to mastering the device prior to his first navigational watch. This will be crucial to the navigation safety of the vessel in the event paper charts are not required or available on the vessel.

Hoping above information is clear and well understood.

If not please do not hesitate to contact your superintendent or the QHSE department.

**QHSE**  
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