

RESPONSIBILITIES

- training institutions should make sure that the COLREGS are taught effectively
- managers and owners should ensure that navigating officers recruited for their ships, especially for the first time, are competent navigators. Evidence shows that reliance on the certificates of competency is no longer acceptable as proof that the watchkeeping officer understands the COLREGS. Owners must positively make the effort to engender a safe navigational culture on board their ships
- masters should assess watchkeepers' navigational competence
- bridge watchkeepers should ensure they have the proper navigational skills.

HOW TO ENSURE THAT NAVIGATING WATCHKEEPERS HAVE THE RIGHT COMPETENCE

The lack of understanding of the COLREGS can be addressed by considering:

- rigorous pre-joining assessment
- navigational audits, including engendering a safe navigational culture
- appraisals of watchkeepers to include bridge competence assessment
- additional training, for example computer-based assessments
- to include bridge competence in ISM masters reviews.

CASE STUDY

In 2011, a large container ship was proceeding at 21 knots from Hong Kong to Shanghai. The second officer was on watch and at 0200 hours the AB lookout was allowed to leave the bridge to carry out fire patrols. The visibility was good although reduced at times by heavy rain and moderate seas. At 0200 hours, the ship was overtaking a slow-moving freighter and was clearing some fishing vessels on the port side. However, the watchkeeper was concerned by the movement of a large fishing vessel ahead not showing regulation lights and he decided to leave this fishing vessel two miles to starboard by making a bold alteration of course to port. Four minutes later, the ship collided with another unseen fishing vessel. The collision resulted with the fishing vessel sinking with fatalities.

The Flag State investigation resulted with some conclusions, including:

- the watchkeeper was not competent to keep a bridge watch
- there was a failure to comply with the COLREGS, master's night orders and the Flag State guidance for carrying out a safe navigational watch
- watchkeeper did not reduce to a safe speed when navigating in heavy traffic
- watchkeeper released the lookout from the bridge
- altered course to port when the ship was the stand on vessel.

The Flag State considered that these were serious departures from regulation, guidance and best practice that brought the knowledge, competency and judgement of the watchkeeper into question. The watchkeeper had sailed with the owner for many years.

The above incident is not an isolated case study and the club's experience often suggests that similar situations are regularly happening. A proper assessment of the navigational competence of officers prior to joining the owner and an assessment of the watchkeeping competency by the master should be considered as part of the joining and familiarisation process.

CASE STUDY

A large ship was navigating off the coast, with the master and a junior officer of the watch on the bridge. The ship encountered fog patches and the lookout was sent down below to work on deck and shortly afterwards the fog closed in to become dense. The ship maintained its course and speed of more than 20 knots and no fog signals were sounded. A radar target was picked up one mile ahead and a small alteration of course to starboard was made by the junior watchkeeper. The master countermanded this alteration and the watchkeeper thinking that the master had command of the watch did not challenge the master's order.

The collision resulted with the small ship sinking. The small ship also failed to sound fog signals or take avoiding action.

LESSONS LEARNT

- comply with the COLREGS
- proceed at a safe and appropriate speed
- use fog signals
- have a lookout at appropriate times
- encourage 'challenge and response' from the junior officers
- check masters and bridge team effectiveness with navigational audits.

KEEPING A LOOKOUT – COLREGS RULE 5

Rule 5 states: *Every vessel shall at all times maintain a proper lookout by sight and hearing as well as by all available means appropriate to the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.*

Keeping a lookout is the first rule to comply with whilst on the bridge. Looking out of the bridge windows and seeing what is ahead, astern and either side of you seems to be stating the obvious, but experience and case studies show that many navigators appear to forget this advice.

The lookout is an integral and important part of the bridge team. There are a large number of incidents that could have been prevented by a well-trained lookout. It is implicit in STCW 95 that at all times during the hours of darkness and in busy shipping areas when underway a separate dedicated lookout must be kept on the bridge in addition to the watchkeeper.

COLLISIONS WITH FISHING VESSELS

Fishing vessels have always been a source of irritation to the officer of the watch. They rarely show the correct navigational lights, hardly ever abide by collision regulations, behave erratically, fish in traffic separation schemes and more often than not do not keep a proper lookout. However, they share the sea lanes with ships and we therefore have to deal with their actions in as safe a way as possible.

Club data over the past 10 years shows a definite increasing trend in the number of collisions involving fishing vessels. These collisions show an increase particularly in Asian and most noticeably in Chinese and adjacent waters. This could be because of the increased trade to that geographical area, the fact that sophisticated electronic devices (VDR, shore VTS and radar) can confirm that a collision has taken place and the fact that the fishing communities in these areas are reporting incidents to the authorities. The costs of the collisions are also increasing and the fact that the fishing vessel was not showing the correct lights or navigating without a proper lookout seems to have little bearing on the outcome of the claim or the subsequent court proceedings.

In many cases analysed, it is evident that the straightforward navigational techniques of:

- making sure a good lookout is maintained
- complying with a safe speed would have been enough in the majority of cases to have prevented many of the incidents.

FATIGUE

Fatigue is definitely an issue that has an impact on navigational claims. It is difficult to see how many claims are caused solely by fatigue, but the navigational claims identified by the club where fatigue was an issue and those in the public domain make this issue significant.

Bridge procedures should ensure that fatigue is addressed by:

- having a formal fatigue management plan
- having guidelines to address the problem of fatigue on watch. For example, calling the master when starting to fall asleep
- masters referring to fatigue in their standing orders
- always maintaining a bridge lookout AB at all times during the hours of darkness
- training lookouts in their duties.

The now famous pictures of the container ship *Alva Star* running into the cliffs of a Greek island is not an isolated case. Similar incidents happen regularly and are more often than not caused by the watchkeeper falling asleep without having a lookout AB on the bridge. The club is a partner in a consortium of academic institutions and shipping organisations sponsored by the European Commission to carry out a research project named '**Project Horizon**' (www.project-horizon.eu), which is looking into 'watchkeeper fatigue'. The project results will provide useful advice for combatting watchkeeper fatigue.

CASE STUDY

A container ship doing 16 knots was overtaking a handysize bulk carrier doing 13 knots coming out of the Baltic. It was approximately 0500 hours in the morning with good visibility when the overtaking container ship collided into the stern of the bulk carrier. The watchkeeper on the container ship was alone on the bridge and fell asleep, and the bulk carrier did not take action to avoid collision.

There have been a number of documented collisions, including some recorded by the club where the overtaking vessel has just apparently run into the vessel being overtaken. It often appears that the watchkeeper had either just not taken any action for reasons unknown or that the watchkeeper had simply fallen asleep. There can be no other explanation. Fatigue is a major problem in the context of safe navigation. It leads to groundings and collisions, and it should be addressed by owners.

ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEM – (ECDIS)

The introduction of ECDIS is going to have a big impact on how ships will be navigated. (Please refer to *Standard Safety ECDIS special edition*, September 2011 link below). If, as it appears, we are seeing navigational incidents increasing where there is moderately sophisticated equipment, it is reasonable to assume that there could be further increases when a sophisticated system such as ECDIS is mandatory on all ships. Presently a low percentage of ship's watchkeeping personnel have been trained in the use of ECDIS. Many authorities have warned of the issues and complexities surrounding the training that is going to be required for watchkeepers on the different types of ECDIS. Companies should heed these warnings and consider the introduction of ECDIS as a significant management of change issue and carry out the risk assessments associated with its introduction and implementation.

There is already evidence that the failure to understand ECDIS systems on board has been the cause of some groundings.

www.standard-club.com/docs/StandardSafetyECDIS24August2011.pdf



^ ECDIS – Image courtesy of ECDIS Limited