

Collision at Sea, the Unthinkable – Part 1



'Princess TaiPing after the collision - the vessel was sliced in half, but one half remained afloat'

The introduction of the Automatic Identification System (AIS) for world-wide shipping has been unquestionably a boon to sailors, but it is no insurance against collisions at sea, as teenager Jessica Watson's recent incident clearly shows. And she's not the only one. In spite of the GPS, the EPIRB, the AIS and a host of other lesser potentially life saving equipment, sailors are still vanishing at sea.

In 2007 **Neil Stanley Qualtrough** set out on his yacht from Honolulu to sail to either Tahiti, Fiji or Samoa. In spite of proper equipment on board, the sailor mysteriously vanished. Did he collide

with a ship? It must have been instant, because no distress message of any sort was ever received.

In the same year **Chris Malchow, 31, of Victoria, and Courtenay Steele, 27, of Saltspring Island**, set out Sept. 8 to sail from Hawaii to Canada on their nine metre wooden sailing boat Takaroa II, and simply vanished. They were due to arrive Victoria BC in Canada on October 16, but no distress call was ever received.

In 2008 Australians **Bruce Glasson and Graeme Woodhouse**, both experienced sailors, set off from Fiji to sail to Brisbane in their yacht 12.8 metre yacht Blessed Be. While they had experienced some rough weather, their last communication said they were making slow progress but all was well and they expected to be in Brisbane in about three days. In spite of a wide search, nothing was ever heard of them again. Did they hit a ship?

One of the distinct possibilities is that all these yachts collided with ships, but some incidents are not so mysterious.

This year in May, on a sailing journey from Phuket in Thailand to Langkawi in Malaysia, American **Kenneth Wayne** was lost at sea after his yacht was hit by a trawler which did not stop after the collision. The yacht sank, but his three crew mates survived to tell the story and were later rescued by another fishing boat.

In April this year, **Nelson Liu** was one day away from achieving a double trans-Pacific crossing in a replica ancient Chinese sailing junk, the Princess TaiPing, when they were rammed and sunk by an unidentified freighter, which did not stop after the collision. The crew clung to the wreckage for five hours before being rescued.

These are just some of the dozens of stories that are likely to keep you alert on any sea crossing.

So what help, if any, you can expect to receive from a ship on a collision, or near-collision course, to avoid that collision - the ultimate nightmare being that you are both

becalmed and have, for some reason, lost your engine, when the ship appears?

Talking to ships' captains can be very enlightening, and here are some words of wisdom from a ship's captain of many years' experience:

Let's take the example of a 60,000 tonnes vessel. This ship might be about 250 metres long and 36 metres in the beam will draw about 12 metres when loaded. This is a medium sized ship.

Here are some things for the cruising sailor to be conscious of:

Such a ship from full speed ahead after being ordered to go full speed astern, will travel .7 of a nautical mile before coming to rest

If the rudder is pulled hard over at full speed, the vessel will travel .22 of a mile before the reciprocal course is reached.

The height of the watch man's eye on such a ship will be between 93 feet and 69 feet, dependent on whether she is loaded or not. This gives a distance to the horizon of between 9 and 11 miles.

Due to the curvature of the earth's surface, the distance that can be seen in clear weather, neglecting such things as refraction, is dependant on the height of the eye of the observer. The formula for this is: Distance in miles to the horizon = 1.15 X square root of HE in feet i.e. 10 feet HE horizon is 3.6 miles, 100 feet 11.5 miles. So, if the watchman on a bridge of a ship at a height of 100 feet is looking at a yacht with a mast height of 40 feet, he should be able to see it at a distance of 19 miles. However it probably could not be seen due to its small size at that distance.

As the vessels approach, the yacht itself, at 11.5 miles, would be exactly on the ship's horizon. However, if there were mist or clouds on the horizon, the ship would still not see the yacht. With blue sky and clear weather, the yacht would then be visible as a silhouette on the horizon.

As the two craft continue to approach each other, the yacht would drop between the horizon and the ship so that the silhouette effect would disappear and the yacht would merge into a back ground of white horses and once again be very difficult to see – even more so if close hauled in an end aspect to the bridge. In overcast weather or with a sea haze, detection would be even more difficult.

It would be much more practical if sails were made of bright orange or red, or any other colour but white.

A container ship watchman would advise any yacht owner NEVER to paint their boats white, black, blue (specially mid blue) grey or green. Yellow, red or orange would be ideal.

Poor visibility from ships' bridges is another consideration to take into account for the cruising sailor. Quite frequently there are derricks, Sampson posts, a forest of masts, cranes and wires, not to mention containers in some areas cluttering up the view forward, particularly on the opposite side of the ship from where the watchkeeper is standing. This means that it is usually the port side of the ship which is 'blind'.

Containers are a particular problem, and sometimes the watch keeper has to move from side to side to check that all is clear. If the watch keeper's attention is taken by a large object on one side, he might very well miss a smaller object on the other side. This is not always the case of course. Some ships have very good visibility.

So you can see that there are many aspects making it difficult from the watch man's point of view.

In short, will a ship see you? - You can't count on it. This suggests that one should always attempt to keep sufficiently far from ships so that the loss of an engine at the wrong moment will not put you in danger..

In Part 2 I will talk about other aspects, such as the effectiveness of lights at night, the situation of a yacht in close quarters with a ship and the question of the effectiveness of radar.

by Nancy Knudsen 2:39 AM Sat 19 Sep 2009 GMT