



SEA VIEWS

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A 100 Years since the *Titanic*: The *Costa Concordia* Grounding

Mansoureh Shahryari

The initial Safety of Life At Sea (SOLAS) Convention which dates back to 1914 was a direct consequence of the sinking of the *Titanic* two years earlier a century ago. The 100-year anniversary of the tragedy of the *Titanic* is the theme for the World Maritime Day 2012 proposed by the International Maritime Organization (IMO). According to the former Secretary General of the IMO, Mr. Mitropoulos, this theme would provide an opportunity to take stock of improvements in maritime safety over the 100 years since the sinking of the liner, and examine whether the lessons drawn from one of the most costly (in terms of human lives lost) accidents have been applied. It also provides a platform to examine which areas, within the overall spectrum of maritime safety (construction, operations, cargo, human elements, etc.), should be given priority and identify the key contributory factors (systems, concepts, mechanisms, human, etc) in the continuous quest for enhancing safety in shipping.

The loss of the *Titanic* resulted in the death of 1,503 people by drowning or freezing in the icy waters of the Atlantic. In light of this highly publicized disaster, maritime nations met and established SOLAS, a set of laws taking into account lessons learnt from the disaster. The 1914 version was superseded by SOLAS 1929, SOLAS 1948, SOLAS 1960 (the first to be adopted under the auspices of the IMO) and SOLAS 1974. SOLAS 1974 is still in force today, but it has been amended and updated many times. The regulations relating to life-saving facilities and arrangements contained in Chapter III of SOLAS, a new version of which entered into force on 1

July 1998, are intended to ensure that in the event of a catastrophe at sea, passengers and crew have the greatest chances of survival. Improved design and equipment (i.e., in lifeboat design and evacuation chutes) , better fire protection, satellite communications, distress alerts, rescue planes and helicopters, navigational control, and trained personnel also contribute to improved safety at sea.

Almost 100 years after the *Titanic* tragedy, the maritime world faced another blow on the night of 13 January 2012 when the *Costa Concordia* an Italian cruise ship ran aground off the Italian coast. The vessel with an almost all-Italian crew which would be intimately familiar with sailing conditions in the area was ripped open by submerged rocks off a Tuscan island in well-charted waters. There were 3,200 passengers and about 1,000 crew members. The ship captain was reported as saying that the rock was not indicated on the ship's nautical charts.



Figure 1 The *Costa Concordia* aground off Giglio Island, Italy

Source: www.bbc.co.uk

The reasons for this accident might be technical, human error, or possibly a combination of both. One of the key elements mentioned by investigators is the electrical systems as modern ships tend to use electrical generators to drive the engines; so a power cut leaves the captain helpless to steer away from danger. The second factor could be human error as there was concern at the speed at which the ship listed onto its side. Also the crew's inability to launch the lifeboats and also provide information for the panicky passengers has been mentioned by individual survivors.

What is striking was that many of passengers were forced to jump overboard and swim to the beach despite SOLAS requirements that there should be enough lifeboats as part of the safety elements for passenger ships. Survivors claimed that they were fortunate to get onto a lifeboat as

the rescue process was poorly organized. This is an eerie echo of the *Titanic* disaster where the shortage of lifeboats contributed to the large numbers of fatalities with some fortunate enough to get onto lifeboats. That this is repeated in the 21 century is clearly a case of lessons not fully learned. While equipment on board the *Costa Concordia* was adequate as mandated under SOLAS, rescue operations by the captain and crew were not expeditiously executed. This could be due to human error and unqualified crew members and point to the need for enhanced training and education for them.

The sinking of the *Titanic* is one of the most well known disasters in history. Failures in ship design and the lack of safety elements on board were the main reasons for the tragedy, according to investigations. Improved ship designs (i.e., double hulls) to meet safety criteria and also increase in ship safety requirements (minimum number of lifeboats should match the number of passengers and crew aboard) were part of the lessons learned from that titanic disaster.

Other lessons too need to be learned by those in this industry from the shipbuilders to the crew. More research and study on technological development for shipbuilding are required while there is certainly a need for more training and education for crews to control the situation when distress occurs. In the shipbuilding industry, having the technology to build something does not mean that they should. Much additional research has to be conducted before the final product is launched to ensure safety of human life is prioritised. Likewise, having a sea master certificate does not translate automatically to experienced crew on board. Many training courses and internship positions are required for the crew before entrusting them with critical positions such as on a cruise with thousands of passengers. Each crew member has the responsibility for human life on board where passengers assume that the carrier has met all safety requirements. In the case of *Costa Concordia*, the weather conditions were good, the water area well-mapped, the crew familiar to the area, and the ship equipment and technology one of the best. This did not prevent the panic when the incident occurred as there were not enough steps taken to control the situation such as timely information and rescue operations.

Shipping technology has to seriously take into account a review of SOLAS for the safety of passengers especially for cruise ships. Otherwise the distress that passengers faced on the night of 13 January 2012 on the *Costa Concordia* will continue to play out on the high seas. Or, more poignantly and tragically, the cruise industry may be forced to reprise what happened on that cold night 100 years ago when the mighty *Titanic* sank into history.