

Surviving disaster – The Titanic and SOLAS



In 1914, two years after the Titanic disaster of 1912, in which 1,503 people lost their lives, maritime nations gathered in London adopted the International Convention for the Safety of Life at Sea (SOLAS Convention), taking into account lessons learned from the Titanic. The 1914 version was superseded by SOLAS 1929, SOLAS 1948, SOLAS 1960 (the first adopted under the auspices of the International Maritime Organization) and SOLAS 1974.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 appliances 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, better fire protection, satellite communications, rescue planes and helicopters and trained personnel also contribute to improved safety at sea.

Speed of navigation around ice
The Commission into the Titanic ruled the loss was due to collision with an iceberg brought about by excessive speed at which she was being navigated. Under SOLAS, when ice is reported on or near his course the master of every ship at night is bound to proceed at a moderate speed or alter course.

Ice patrol
In the first SOLAS 1914, after the Titanic disaster, ice patrols in the north Atlantic were set up and continue to be a SOLAS requirement.

Public address system
There was no public address system on the Titanic and news filtered to the passengers slowly, adding to the disorder and confusion. Under SOLAS, all passenger ships must be fitted with a public address system.

Lifeboat design
Some people died from hypothermia in the Titanic lifeboats because they were open and gave no protection against the cold. Under SOLAS, lifeboats must be fully or partially enclosed. On passenger ships, partially enclosed lifeboats can be used as they are easier to get into, but they must have a collapsible roof to fold across.

Training of crew in lifeboat drill
The crew of the Titanic lacked training in loading and lowering the lifeboats and few knew which boat they were assigned to. Lifeboats were not filled to capacity because senior officers did not know the boats had been tested and were strong enough. Under SOLAS, every crew member must participate in regular practise drills and have easy access to training manuals.



Distress alert
The Titanic used radio which had a limited range of 200 nautical miles. Ships can now communicate globally via satellites.

Marconi radio wires

Helicopters and rescue planes
Unavailable in 1912, helicopters and rescue planes are now used to locate, search for and rescue survivors.

Lifeboat drill
No lifeboat drill was held on the Titanic. Under SOLAS chapter III an 'abandon ship' and fire drill must take place weekly on all passenger ships.

Evacuation chutes
Passengers on the Titanic jumped from windows and doorways into the lifeboats as they were lowered, often injuring themselves or other passengers. New emergency evacuation chutes are both safer and quicker.

Number of lifeboats
The Titanic did not have enough lifeboats for all passengers. Under SOLAS, passenger ships must carry enough lifeboats (some of which can be substituted by liferafts) for all passengers, plus liferafts for 25%.

Immersion suits
The sea temperature when the Titanic sank was below freezing point and many people died in the water from hypothermia. Under SOLAS, a specific number of immersion suits must be carried on both passenger and cargo ships, mainly for the crews of rescue boats.

Location
The land station at Cape Race, Newfoundland and ships other than the Carpathia and the Californian heard the Titanic distress call but the airwaves were crackling and the Titanic's position was misinterpreted. With EPIRBs and global positioning systems, the position of a ship in distress can be automatically sent.

The Carpathia
Received distress call at 12.25am. Travelled 58 miles and picked up first lifeboat at 4.10am.

The Californian
Stopped because of the ice less than 20 miles from the Titanic. Did not approach until after 6.00am when the Carpathia was spotted. Arrived at 7.30am - too late to rescue any survivors.

The Titanic
Hit iceberg at 11.40pm and sank at 2.20am.

Distress watch
The Californian was less than 20 miles away but the radio officer had gone off duty when the distress messages were sent. Under SOLAS, every ship while at sea must maintain a continuous watch on the distress and safety frequencies.