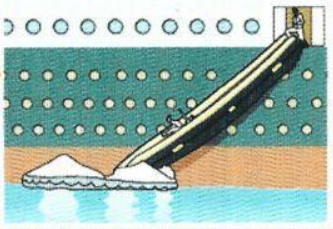
The *Titanic* and SOLAS

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 The 1914 version was superseded by SOLAS 1929, SOLAS 1948, SOLAS 1960 (the first adopted under the auspices of the International Maritime Organization) and SOLAS 1974.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.

Evacuation chutes

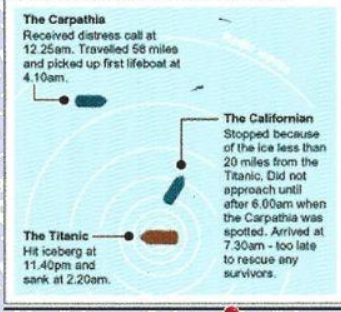
Passengers on the Titanic jumped from windows and doorways into the lifeboats as they were lowered, often injuring themselves or other passengers
New emergency evacuation chutes are both safer and quicker.



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 automically sent.

Cospas sarsat satellite



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.

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.

Immersion suits

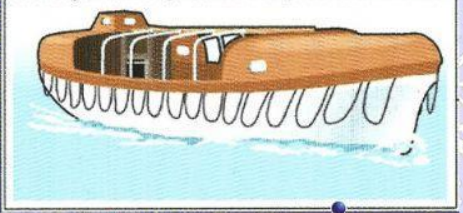
The sea temperature when the Titanic sank was below freezing point and many people died in the water from hypothermia.
Under SOLAS, a specific number of immersion suits must be carried on both passenger and cargo ships, mainly for the crews of rescue boats.

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.

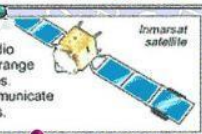
Lifeboat design

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.



Distress alert

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



Inmarsat satellite

Helicopters and rescue planes

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

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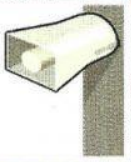
Public address system

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.



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%.

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.

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.

Join the sentence halves to find out how the hard lesson of the Titanic influenced SOLAS.

1. The collision of the *Titanic* with the iceberg was catastrophic because the ship was going too fast;
2. The crew of the *Titanic* didn't know there was an iceberg in the area
3. People died of hypothermia in the freezing water
4. People also died of hypothermia in the open *Titanic* lifeboats;
5. *Titanic*'s distress signal couldn't be received beyond 200 nautical miles;
6. There weren't any helicopters or rescue planes available in 1912;
7. There was confusion and chaos in the *Titanic* as not all passengers could be informed about developments;
8. Many people died because there weren't enough lifeboats for all the passengers on the *Titanic*;
9. Lack of training and information regarding the lifeboats on the *Titanic* led to the crew not knowing their assigned lifeboats, how to handle them and what was their capacity;
10. The *Titanic*'s position was misinterpreted due to crackling in the airwaves
11. Passengers of the *Titanic* were injured when they jumped from windows and doorways into the lifeboats;
12. The ship closest to the *Titanic* missed the distress call because her radio officer was off duty at the time;

- as a result, passenger ships now must carry enough lifeboats for all passengers plus life rafts for 25%.
- therefore, ships sailing in areas afflicted by ice have to proceed at a moderate speed or change their course now.
- to prevent this, all modern passenger ships must be equipped with a PA-system.
- to avoid that, ships now have emergency evacuation chutes.
- however, they are used extensively for Search & Rescue now.
- that's why nowadays lifeboats must be fully or partially enclosed.
- but now there are ice patrols in the North Atlantic to warn ships.
- in view of that, every crewmember must take part in regular drills and have access to manuals. Passengers must also participate in weekly evacuation and fire drills.
- so now ships are obligated to carry a specific number of immersion suits.
- now, though, satellites enable global communication for ships.
- for that reason every ship at sea must maintain a continuous watch on distress and safety frequencies.
- but now EPIRBs and GPS enable automatic transmission of the position of a vessel in distress.