

DEPARTMENT OF TRANSPORTATION
U.S. COAST GUARD
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ON THE SIGNIFICANCE OF THE TITANIC DISASTER
BEFORE THE HOUSE COMMITTEE ON MERCHANT MARINE AND FISHERIES
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At 2:15 AM on April 15, 1912, the British White Star liner TITANIC sank, causing the loss of 1,503 lives.

This tragedy has acquired the aura of the world's greatest maritime disaster. In large measure, this unenviable distinction has been created by the large number of lives lost -- among whom were numerous distinguished members of society --- by the attitude of invulnerability falsely based on recent technological achievements, including the construction of the TITANIC herself --- and, by the air of inevitability created by many authors who have written about the disaster. Books and movies have and will continue to perpetuate the memory of the tragedy.

The sinking of the TITANIC influenced maritime legislation and regulation in many nations and caused improved cooperation among various maritime nations. In the United States, the disaster had an immediate effect on legislation.

First, laws were passed and regulations issued which increased the control over the use of the wireless. Now, not only passenger steamers but cargo steamships as well are required to have radios. Also, an auxiliary power source is now required in case of an emergency. Regulations required effective communication between the ship's bridge and the radio room. Two or more skilled operators were to be carried, and one was to be on duty at all times when the ship was underway. Also, a bill was passed on August 13,

1912, which gave priority to distress and military messages. These provisions were influenced by events surrounding the sinking of the TITANIC. The steamship suspected of being the closest ship to the TITANIC when she struck the iceberg did not have an operator on duty and did not come to the aid of the distressed ship. Also, there was much superfluous wireless traffic which complicated the rescue efforts. Many of these wireless regulations were given international status by the signatories of the Berlin Radiotelegraphic Convention, which included the United States.

Second, the United States adopted certain provisions of the 1914 International Convention on Safety of Life at Sea (SOLAS) with respect to lifesaving devices despite the fact the convention never came into force due to the outbreak of World War I. These provisions were made part of the Seamen's Act of March 4, 1915 and related to the number and character of lifesaving devices carried on board ships. The TITANIC carried enough lifeboats for only half of those on board. Most lives lost could be attributed to this deficiency.

Third, the same law provided for the certification of "able seamen" and persons qualified as "lifeboatmen." A number of the TITANIC's lifeboats were not adequately crewed.

But as the 1912 Annual Report of the Bureau of Navigation noted, "The profound feeling aroused throughout the United States by the loss of the British steamship TITANIC on April 15, did not find expression in radical legislation difficult or impossible to administer, but readily concurred in the sentiment of other nations in favor of an international conference for the consideration of means to prevent the recurrence of such disasters."

The world's public was stunned by the TITANIC disaster and their governments immediately sought means to cooperate to avoid any recurrences. The most important gathering was The International Conference on Safety of Life at Sea in 1913-14, in which the United States participated. The responsibility for updating the SOLAS Convention rests with the International Maritime Organization (IMO) headquartered in London, which has served as repository for SOLAS Conventions since its establishment in 1958. The latest major SOLAS revision was done in 1978. Ice and the TITANIC were the dominant topics at the conference, which convened in London on November 12, 1913. On January 20, 1914, the representatives of thirteen maritime powers signed a convention that provided for "the inauguration of an international derelict-destruction, ice-observation, and ice-patrol service, consisting of two vessels, which should patrol the ice regions during the season of danger from icebergs and attempt to keep the transatlantic lanes clear of derelicts during the remainder of the year." The signatories were: Austria-Hungary, Belgium, Canada, Denmark, France, Germany, Great Britain, Italy, Netherlands, Norway, Russia, Sweden, and the United States. The U.S. was asked to manage this triple task, the expense to be shared by the thirteen countries. Because the convention would not go into effect until July 1, 1915, Great Britain, on behalf of several of the countries, asked the United States to undertake the patrol at once. In fact, two U.S. naval scout cruisers had patrolled the danger area through 1912 following the TITANIC disaster and in 1913 two Revenue Cutters had been used. On February 7, 1914, President Woodrow Wilson officially tasked the Revenue Cutter Service, a predecessor of the Coast Guard, to begin immediately the international ice-observation and ice-patrol service.

Each year since 1914, with the exception of war years of 1917-18 and 1942-45, the Coast Guard has maintained the patrol. The duties of the ice patrol are to find and to keep daily track of icebergs and field ice, determine their set and drift, and report this information to the world. Ice observation generally begins in March and ends in August. However, the patrol may be extended whenever there is thought to be a significant threat to the shipping lanes. The patrolled area is about the size of the State of Pennsylvania and is in the general region of the Grand Banks of Newfoundland. In the latter part of the ice season, April to July, the area is blanketed in fog, created by atmospheric conditions at the confluence of the Gulf Stream and Labrador current, which adds to the danger.

The need for the International Ice Patrol has been reinforced by events which occurred during World War II at which time the patrol was suspended. The British SVEND FOYNE collided with a berg off the southern tip of Greenland on March 19, 1943 and went down. All 145 persons on board were rescued. There were, however, many other collisions of ships and bergs. On May 27, 1945, the ice almost caused a disaster that would have rivaled that of the TITANIC. Allied convoy ON-303 was plying across the Atlantic on course for America. For five days thick fog had limited visibility. At 7:10 p.m. the British frigate CHELMER reported to the convoy commodore on board a freighter that a surface craft was sighted on the starboard bow of the convoy. A few minutes passed and the frigate corrected the report -- it was a growler (a small iceberg). At 7:18 p.m. the CHELMER warned large iceberg! A fifteen-second blast belched from the horn on board the commodore's ship, which meant "Turn left, an emergency." No ship responded! Again, the horn blasted and finally horns responded with acknowledgment of the order. The warning had been received and the turn was being executed. But how many of

the eighty-three merchantmen and eight escorts understood the warning and endeavored to avoid the ice and each other in a thick fog? The radio tapped out the telegraphed message in hopes of informing all ships. The commodore could not see in the fog; had the convoy executed the turn? The new course was radioed in plain language and all engines were ordered stopped.

Within fifteen minutes, twenty ships had collided with one another, some more than once, and four had struck the iceberg. Miraculously, none sank. Two factors prevented a catastrophe. First, the convoy was making 9.5 knots (12 m.p.h.) about one-half the speed of the Titanic when she met her fate. Second, the commodore perceived that a collision with ice was a greater danger than that among ships traveling on a similar course; he had immediately ordered the emergency turn. The following day, May 28, the badly shaken convoy passed over the site where the luxurious White Star liner had gone down.

World War II accelerated the development of electronic aids to navigation such as LORAN (Long Range Aid to Navigation) and RADAR (Radio Detecting and Ranging). These devices have the potential to make transit of ice infested waters safer, but they could not replace the International Ice Patrol. LORAN permitted ships to more accurately fix their positions and those of icebergs reported by the International Ice Patrol in any weather condition. Before LORAN existed, ice patrol cutters and the transiting merchant ships were at times fogbound for days. Their position had to be determined by dead reckoning and radio direction finder bearings. This was the best technology available in the 1910's '20s, and '30s, and it left much possibility for error.

Radar was another electronic child of the war. Simply, a radio beam is sent out by a ship and, when it strikes an object, the beam bounds back to

the sender. The distance to the object can then be computed. Radar had been used with some success in the ice zone throughout the war. In 1947 the first experiments to determine the capability of radar to detect floating ice were undertaken. The results were disappointing. An iceberg was found to be only one-sixteenth as good a radar reflector as a comparable sized ship. Furthermore, sea water is a better reflector than ice, so there are many weather and sea conditions during which radar could not detect a berg. The maximum range of radar detection of a dangerous size growler is a scant four miles. RADAR has been refined since 1947 but it still has shortcomings in detecting ice.

The International Ice Patrol was resumed by the U.S. Coast Guard in March 1946. Three international safety conferences (1948, 1960, and 1974) have reaffirmed the need for the service. The nineteen supporting countries of the Ice Patrol are: Belgium, Canada, Denmark, Federal Republic of Germany, Finland, France, Greece, Israel, Italy, Japan, Liberia, Netherlands, Norway, Panama, Poland, Spain, Sweden, United States, and Yugoslavia.

There is always danger. Icebergs are a phenomenon of nature, a hazard to shipping which cannot be controlled, regulated, or entirely avoided, even though man periodically perceives that he has mastered nature through technological achievement. On January 30, 1959, the merchant ship HANS HEDTOFT reported striking an iceberg about forty miles south of Cape Farewell, Greenland. This ship, on her maiden voyage, was equipped with the latest electronic navigation aids, including LORAN and RADAR. She sank without a trace with ninety-five persons on board approximately one month before the start of the 1959 International Ice Patrol, and outside the area assigned to the ice patrol.

Numerous memorials have been dedicated to the victims of the TITANIC. The most dynamic is the International Ice Patrol. Most of the legislation and regulations which were a direct result of the sinking have been superseded by new laws. But the International Ice Patrol serves on. Neither ship nor life has been lost from collision with ice while the International Ice Patrol was on station since the sinking of the TITANIC.