

WHY DID THE TITANIC SINK?

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On April 14, 1912, Titanic collided with a massive iceberg and sank in less than three hours. At the time, more than 2200 passengers and crew were aboard the Titanic. Only 705 survived. According to the builders of the Titanic, even in the worst possible accident at sea, the ship should have stayed afloat for two to three days. The material failures contributed to the rapid sinking of the Titanic.

Originally, historians thought the iceberg had cut a gash into Titanic's hull. Scientists used sonar to examine the area and discovered the iceberg had caused the hull to buckle, allowing water to enter Titanic between her steel plates.

During an expedition to the wreckage in the North Atlantic on August 15, 1996, researchers brought back steel from the hull of the ship for metallurgical analysis.

Tests showed that the steel from the Titanic was about 10 times more brittle than modern steel when tested at freezing temperature - the estimated temperature of the water at the time the Titanic struck the iceberg.

Tests of the steel's chemical composition also showed a high content of sulfur, oxygen and phosphorous. High levels of those elements cause steel to be more brittle.

The chemical analysis also revealed a low level of manganese - another symptom of brittle steel.

The steel used in constructing Titanic was probably the best plain carbon ship plate available in the period of 1909 to 1911, but it would not be acceptable at the present time for any construction purposes and particularly not for ship construction.

As a result of the Titanic disaster there have been made the changes in both the design of ships and the safety regulations governing ships at sea.