Titanic's First 15 Minutes After the Collision: Jumping to Conclusions

by Roy Mengot

Abstract
The British Board of Trade concluded that water was flooding the firemen's tunnel on Titanic 5 minutes after the collision. This piece of evidence has been central in all analyses of the sinking since 1912. This paper shows that the water seen was not the result of direct collision damage, but rather overflow of the #1 hold at G-deck that occurred over 15 minutes after the collision.

Witness testimony in the US and UK hearings after the Titanic disaster have been quoted, analyzed, bent, and twisted to whatever the whims of the user might be. Much of that testimony still makes up the bulk of what we know, or think we know about what happened that night in April, 1912. This article examines a key piece of testimony by lead fireman Hendrickson and how that testimony was used, or abused, to shape the current understanding of Titanic's initial damage and how subsequent flooding sank the ship.

Charles George Hendrickson was 29 at the time of the disaster and was born in Southampton on 6 June 1892. Hendrickson was rescued in Emergency Lifeboat 1.

He testified at the Board of Trade hearings on Day 5 and 10 and described events he saw all through the sinking process. The testimony in question here involved the early sighting of water entering the ship, as it proved pivotal in subsequent explanations of how Titanic sank. During a series of questions aimed at isolating a moment when water was seen entering the ship at the base of the spiral stair cases to the fireman's tunnel, Hendrickson stated:

"4866. You were looking down on the port side of the staircase? - Yes, and saw the water rushing in from the starboard side at the bottom."

The location in question is the twin spiral staircase that ran from D-deck forward down to the fireman's passage on the tank top. The fireman's passage subsequently ran aft to the boiler rooms. This passage was a watertight tunnel (referred to as the pipe tunnel) that the firemen, trimmers, and greasers used daily to go from their bunks in the fore most part of the ship to their stations in the boiler spaces.

In the Board of Trade final report after the hearings, they concluded on page 32:

"The flooding in the first 10 minutes:
In No. 2 hold five minutes after the collision water was seen rushing in at the bottom of the fireman's passage on the starboard side, so that the ship's side was damaged abaft of bulkhead B sufficiently to open the fireman's passage, which was 3 ½ feet from the outer skin of the ship, thereby flooding both the hold and the passage."

This statement has been the crux of analysis to the damage to the ship by professional naval architects and amateur second-guessers ever since the disaster. What damage would the berg need to cause to the ship to produce the "rushing in" of water from starboard in

both #2 hold and the firemen's passage?

Several factors about the ship's design come into play.

1. The #1 hold was very narrow so close to the bow of the ship and flooding there would have filled that small compartment very quickly. In the Bedford/Hackett analysis of the ship, the #1 hold would have overflowed G-deck by midnight (around 20 minutes after the collision). The events taking place with Hendrickson and Ford are in a window of only a few minutes around the time predicted by the Bedford/Hacket analysis.

2. Watertight bulkhead B between #1 hold and #2 hold went up to G-deck, a couple of feet above the waterline, but jogged aft to allow the spiral staircase to cross through the bulkhead. The firemen's passage continues aft through holds #2 and 3, but is watertight except for the access from #1 hold. At G-deck, there are simple doors separating the spiral staircase from the quarters for the lead firemen and the greasers adjacent to the #1 hatch. The #1 hatchway is walled at the sides and front, but the aft side of the hatchway is covered only by a steel gate.

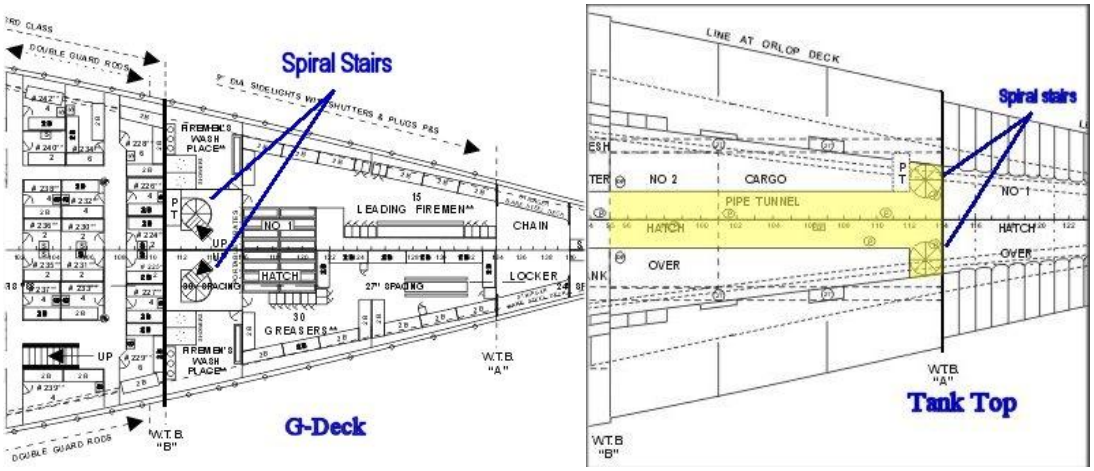

Figure 1: G-Deck crew quarters were in #1 hold watertight compartment. The pipe tunnel on the tank top was built to be part of the #1 hold compartment and was watertight from #2 and #3 holds as it passed through them. (Bruce Beveridge drawings)

3. From G-deck, the twin spiral stairs (one each for down and up) are tightly boxed in going down 25 feet to the keel of the ship. If #1 hold floods out with the stairs as well, then the crew can still access the boiler rooms via E-deck.

The other more mundane testimony Hendrickson gave about his actions before and after the collision is complete enough to build a more complete timeline, and place his "rushing in" comment in chronological perspective.

Hendrickson missed the whole collision. He was dead asleep in his bunk, which was on G-deck. G-deck is the lowest crew deck adjacent to the spiral stairs. The floor of G-deck at that point was only a few feet above the waterline.

The timeline here includes his testimony intertwined with known events:

a) Hendrickson is dead asleep during the collision.

b) The ship comes to a stop and is left pointing north. The process of stopping the ship took 2-3 minutes by most estimates. 4th Officer Boxhall begins his initial estimate of the damage and finds nothing.

c) During this period, Fireman Ford wakes Hendrickson and others in their compartment. Hendrickson gets up, gets dressed, and joins the others in going topside to the well deck. Other boiler room crewmen are awaked by those who felt the collision. All the crew on decks E, F, and G-decks, possibly upto100 men, are all streaming up the spiral stairs and Hendrickson mentions following Ford and many other men up to the forward well deck. **NOTE:** Hendrickson and all the men leaving their G-deck quarters are crossing the spot where "water was rushing in" occurred and no one saw anything out of the ordinary.

d) Some 5 minutes after the collision, Hendrickson is on the well deck. He sees the ice on the deck and the ice berg is "abaft the engine room". Some have taken that to mean he saw the berg going by during the collision. In fact, he states the engines where stopped. What he likely saw was the berg at a distance. The ship turned around to the north and stopped, leaving the berg some distance off the starboard side of the ship. After talking with others about what has happened, he decides to just go back to sleep. How long do sailors discuss an unusual matter before deciding nothing of note was happening? An upper bound of about 10 minutes is imposed due to actions Hendrickson would take later. The carpenter Hutchenson discovers water in holds 1, 2, and 3 and Tom Andrews is also making his inspection during this period.

e) Now some 15 minutes after the collision, Hendrickson starts back for his bunk again. He enters the crew area under the forecastle and starts down the spiral stairs at D-Deck. During his trip back to his bunk, he states that "Ford came back" and told him that water is coming in below. If Ford was "coming back" from a lower deck, then Hendrickson was not all the way back down the stairs but still somewhere between D and F-deck. He looked down the port side of the stairs and sees the water. He makes an interesting statement during the detailed questioning about the water coming in from starboard:

"4894. Was it coming hard? - Yes, it was more than rushing in; it was falling in."

When looking down the stairs from above, there is only the small triangular sliver of space between the stairs and the shaft encasing them. Since Titanic initially had a slight list to starboard from the iceberg damage, water overflowing the #1 hatch a G-deck would have started on the starboard side and as it poured down the stair shaft it would have splashed on the stairs toward port.
Fireman Alfred Shiers stated at the BoT hearing in England that he was reading in his bunk on D or F-deck during the collision. He went on deck similar to the others over the same "rushing in" spot and saw nothing. He went around, took a crewman to the doctor,

felt wind coming back up the #1 hatch. He then watched the water come up the #1 hatch below his quarters for an undeterminite period of time. His activities push the time at which water was first reported around the spiral stairs towards the overflow window in time.

Another fireman, James Taylor stated at the American hearing:

"I was asleep when the accident occurred; sir. The alarm bell for accidents rang outside of our door. I went up on deck, and could not see anything. I went down in our room <on F-deck> again. I stayed in the room about 10 minutes, and somebody reported that there was water in #1 hatch Then we packed our bags, took them in the mess room, in the alleyway, to wait for orders. …"

Again, Mr. Tailor passed over the "rushing in" location and didn't hear about water in the area below him until he had time to go topside, return and then sit in his bunk for 10 minutes.

Conclusion

What Ford and Hendrickson saw was #1 hatch overflowing at G-deck into the shaft of the spiral stairs upwards of 20 minutes after the collision. The BoT hearing conclusion took the testimony to mean it was the initial collision damage that caused water to enter the firemen's passage. In the search for the nature of the damage from the iceberg on Titanic, many scenarios have looked at possible ways for damage to #2 hold or the double keel under the firemen's passage to result in this flooding. The fact may be that the BoT conclusion of this being in the first 5 minutes after the collision was premature, and the damage did not disrupt #2 hold and the firemen's passage together. This simplifies the nature of Titanic's damage to breaks of some sort in the outer skin over too many compartments. It also implies that the firemen's passage may not have suffered serious damage, if any, as a result of the collision.