TITANIC'S LIFEBOATS: AN INCREASED CAPACITY

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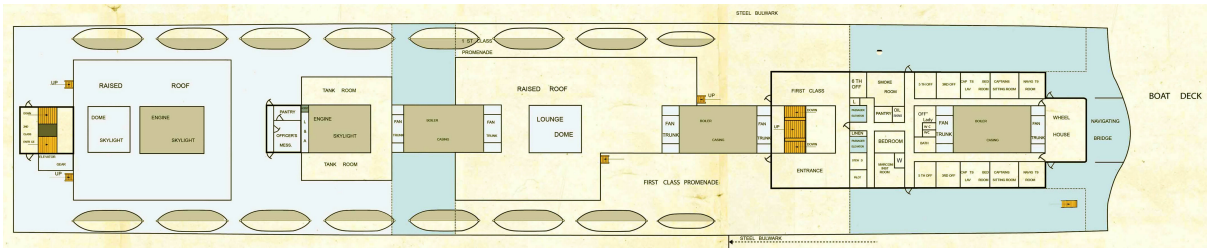
There is all too much incomplete, out of context, inaccurate or plain misinformation about *Titanic*. Much of it stems from media sensationalism or simply the dissemination of inaccurate information in secondary sources. That is particularly true when it comes to *Titanic*'s lifeboats. There are many facets of the subject far beyond the scope of this short article, which merely draws a comparison between the original proposals for her lifeboats (July 1908) and the lifeboats she sailed with on her fateful maiden voyage (April 1912). (It does not address what happened in between, which has been covered elsewhere. See, for example, Ioannis Georgiou's nine-part article in the British *Titanic* Society's *Atlantic Daily Bulletin* from part 1 in December 2012 through to part 6 in March 2014, part 7 in September 2014, part 8 in September 2015 and part 9 in March 2016.)



Based on the original 'Design "D"' general arrangement concept, now on display at the Ulster Folk & Transport Museum, this plan by Lionel Codus depicts the original lifeboat arrangement envisaged by Harland & Wolff. (© Lionel Codus, 2011)

At the end of July 1908, officials from the White Star Line approved in principle Harland & Wolff's 'Design "D"' general arrangement concept for *Olympic* and *Titanic*. Many features of the design were altered subsequently as the shipbuilders and owners refined their proposals, but the outline of the finished product was very much in place.

The arrangement of the boat deck included a second class promenade aft, a first class promenade amidships and an officers' promenade area forward. At that time, the proposal envisaged the placement of eight lifeboats on each side of the ship in the second and first class promenade areas, comprising of seven standard lifeboats and a single emergency cutter. In total, there were fourteen standard lifeboats and two emergency cutters.

However, an interesting detail becomes apparent in comparing the lifeboats shown on the 'Design "D"' proposal to those on *Olympic* and *Titanic* as completed in 1911-12. Between the end of July 1908 and May 1911, the lifeboat capacity – both in absolute numbers and as a proportion of the total passenger and crew capacity of the ships – rose substantially.

The 'Design "D"' general arrangement envisaged the ship's capacity of 600 first class, 716 second class and 1,788 third class passengers (a total of 3,104 passengers).

By the time *Olympic* was completed, the first class capacity had been increased, second class capacity reduced and the third class capacity reduced very substantially. Following experience with *Olympic* in 1911, *Titanic*'s passenger accommodation was improved further and she had additional first class suite and stateroom accommodation compared to her older sister. These changes included additional first class staterooms aft in the officers' quarters on the boat deck, new first class staterooms near the aft grand staircase on A-deck, an expansion of the first class suites amidships on B-deck and more first class staterooms at the forward end of B-deck. According to a berth-by-berth count by researcher Daniel Klistorner, *Titanic* had capacity for 787 first class, 676 second class and 1,008 third class passengers (a total of 2,471 passengers).[1] Compared to the original proposal, her total passenger capacity was reduced by 20.4 per cent.

[1] These figures exclude 56 sofa berths in first class; assume that the alternate first/second class accommodation was used for second class (enabling more passengers to be carried); and assume that the alternate second/third class accommodation was used for second class. If the alternate first/second class accommodation was used for first class and the alternate second/third class accommodation was used for third class, then the figures would be 916 first class, 398 second class and 1,120 third class. (These compare to 905 first class, 564 second class and 1,134 third class passengers on *Titanic*'s passenger certificate dated 4 April 1912. There are always discrepancies in such figures depending on the source material and on what basis the figures have been calculated. The passenger certificate indicates she could carry a total of 3,547 passengers and crew but the figure has been obtained by maximizing the number of passengers in all three classes, which it was not possible to do simultaneously.)

Titanic's passenger certificate gave her crew capacity as 944. On that basis, she could carry 3,415 passengers and crew. The number of crew envisaged in the original proposal was not documented, but it is assumed that it was the same for *Titanic* as completed. The exception is that she had 69 staff to look after the *a la carte* restaurant, which was a later addition and not a feature of the original design proposal. Excluding these staff, the original proposal envisaged 875 crew or 7.3 per cent less, compared to the completed ship.

If the total number of passengers and crew who could be carried changed, then so did the lifeboat capacity. The original fourteen standard lifeboats and two cutters were both installed on *Olympic* and *Titanic*, but the arrangement was improved insofar as the lifeboats originally placed on the first class promenade were moved to the officers' promenade. (There is no evidence the size of these boats changed.) Harland & Wolff also installed an additional four collapsible lifeboats. According to John Eaton and Charles Haas, writing in *Titanic: Triumph & Tragedy*, the White Star Line approved their installation as part of 'Plan 6' on 5 May 1911. These additional lifeboats took the total number of lifeboats carried up to twenty.[2] This increased the lifeboat capacity by almost one-fifth, but more startling was the combination of increased lifeboat capacity and the reduced number of passengers and crew carried. Taking this into account, *Titanic*'s lifeboat capacity as a proportion of the total number of passengers and crew she could carry rose by almost 39 per cent:

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[2] There is no doubt about the number of lifeboats carried. However, depending on how they were calculated then the actual capacity of the lifeboats in 'persons' varies from source to source. Part of the issue lies in that their capacity was calculated in cubic feet and then converted into a capacity in people by assuming that each person occupied ten cubic feet. It was a rough and ready calculation and researchers such as Dave Gittins have explored the issue of whether it reflected a lifeboat's true ability to hold that amount of people.

Titanic's passenger certificate gave her total lifeboat capacity as 1,167. However, it is more common to see the total lifeboat capacity as 1,178 – comprising 65 persons for each of the standard lifeboats, 40 persons for each of the cutters and 47 persons for each of the collapsible boats – and this was the number used by the British report into the sinking.

Complicating matters further, Harland & Wolff were engaged in work to increase *Olympic*'s lifeboat capacity as part of her post-*Titanic* refit in 1912-13. They produced detailed plans which included the capacities of the lifeboats she was fitted with originally (the same as *Titanic*) and the numbers came to a total lifeboat capacity of 1,122 persons – comprising 64 persons for each of the standard lifeboats, 33 persons for each of the cutters and 40 persons for each of the collapsible boats.

	'Design "D"' Proposal for *Olympic/Titanic* (1908)	*Titanic* (1912)	Difference
Passenger capacity	3,104	2,471	- 20.4%
Crew	875	944	+ 7.3%
Total passengers and crew	3,979	3,415	- 14.2%
Lifeboat Capacity	990	1,178	+ 19%
Lifeboat Capacity as Proportion of Ship's Capacity	24.9%	34.5%	**+ 38.6%**

A complete and accurate understanding of any subject comes from understanding all the relevant information. Hopefully future discussions will not overlook the fact that *Titanic*'s lifeboat capacity was increased significantly over the course of her design and construction. Given the widespread impression to the contrary, anyone would be forgiven for thinking otherwise.

ACKNOWLEDGEMENTS & BIBLIOGRAPHY

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