

Titanic's Boat Deck Waterproofed Wood Roofs

By Bob Read, D.M.D.

Introduction

The subject of *Titanic's* boat deck waterproofed wood roofs usually comes up in discussions about roof colors. One would think that if we are talking about wood roofs then it seems that they would be a wood color. The key word is "waterproofed". When wood roofs were waterproofed they were covered with a canvas covering and painted gray. Because of this we have had to use other sources of information to determine which roofs were waterproofed wood. This article will examine each area where these waterproofed roofs were installed.

Navigating Bridge Roof

The waterproofed navigating bridge roof was a somewhat special case due to the fact that the entire navigating bridge was of wood construction. This was because the compasses found in the wheelhouse and on the navigating bridge had to be isolated from any steel or iron. We also know something about the wood construction of the navigating bridge roof from photos. Figure 1 shows the interior of *Olympic's* navigating bridge where the roof can be seen.



Navigating bridge roof Interior

Figure 1

In this photo you can see the individual wood planks of the underside of the roof. The process for waterproofing the navigating bridge roof was:

1. Tongue-in-groove pine boards were used for the roof. The boards were screwed to the underlying roof beams with brass screws.
2. The roof boards were painted with a bitumastic paint to seal the boards and joints and to provide an adhesive for the canvas layer.
3. On top of the wet bitumastic paint a layer of canvas duck was applied and the canvas was smoothed out and a wood instrument was used to press the canvas into the grooves at the plank joints.
4. The canvas was painted with several coats of a medium gray enamel.
5. Teak covering boards were applied to the perimeter of the roof boards.
6. Teak “nosing” was applied to cover the teak board ends and the pine board ends. This “nosing” looks like a moulding being half round in profile.

Figure 2 shows the kind of pine boards which were used on the roof of the navigating bridge. You can see the surface grooves between the individual boards.



Pine boards of the type used on the roof of the navigating bridge

Figure 2

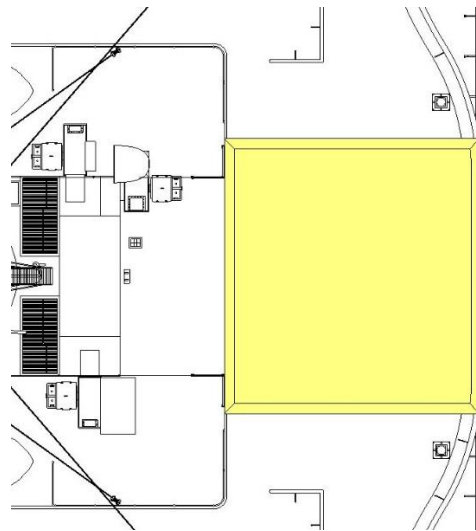
Until recently it was not known what the surface of the navigating bridge looked like. We could see general colors but the texture of the roof surface was not clear. By kind permission, a photo of *Olympic's* navigating bridge roof was supplied by João Goncalves in Figure 3.



Olympic bridge roof detail

Figure 3

As you can see, the grooves between the boards are still visible. This means that the canvas was pressed into the grooves after the bitumastic paint was applied. It has been suggested that maybe there wasn't any canvas applied and just a dark waterproofing coating was applied. What we must remember is that at this time, sophisticated liquid sealing compounds were not available. The canvas provided a matrix to hold and strengthen the paint to keep it from cracking. The paint in turn strengthened the fibers of the canvas. Together it created an impervious waterproofing technique. Figure 4 shows the extent of the waterproofed navigating bridge roof indicated in yellow.



Extent of waterproofed navigating bridge roof

Figure 4

Wing Cab Roofs

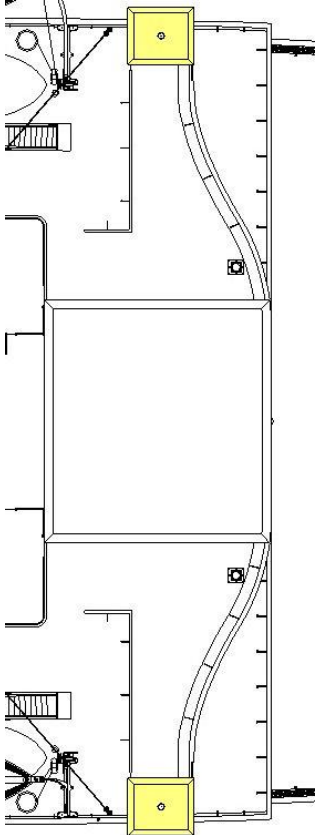
The evidence for a waterproofed wing cab roof can be seen in the starboard *Olympic* wing cab shown in Figure 5. The two aspects that prove this are the individual wood planks which can be seen through the wing cab window and the “nosing” trim which seals the edges of the boards and covering board.



Starboard wing cab roof on *Olympic*

Figure 5

Figure 6 shows the location of the wing cab roofs.



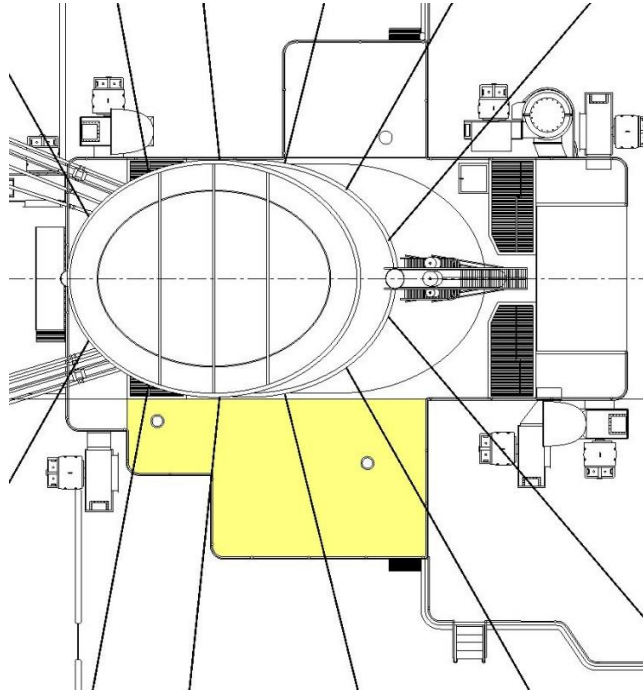
Wing cab roofs

Figure 6

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Officers' Mess Roof

Figure 7 shows the officers' mess roof.



Officers' mess roof

Figure 7

The officer's mess roof represents a departure in the construction and methods of creating a waterproof wooden roof compared to the navigating bridge roof and wing cab roofs. On this roof there was no need for complete wooden construction. Therefore the roof beams were steel. From what we can tell from photos, the underlying wood boards which made up the roof were tongue in groove pine but rather than having grooves at the seams they were flat like commercial wood flooring. Figure 8 show how the tongue in groove planking boards would have looked here.

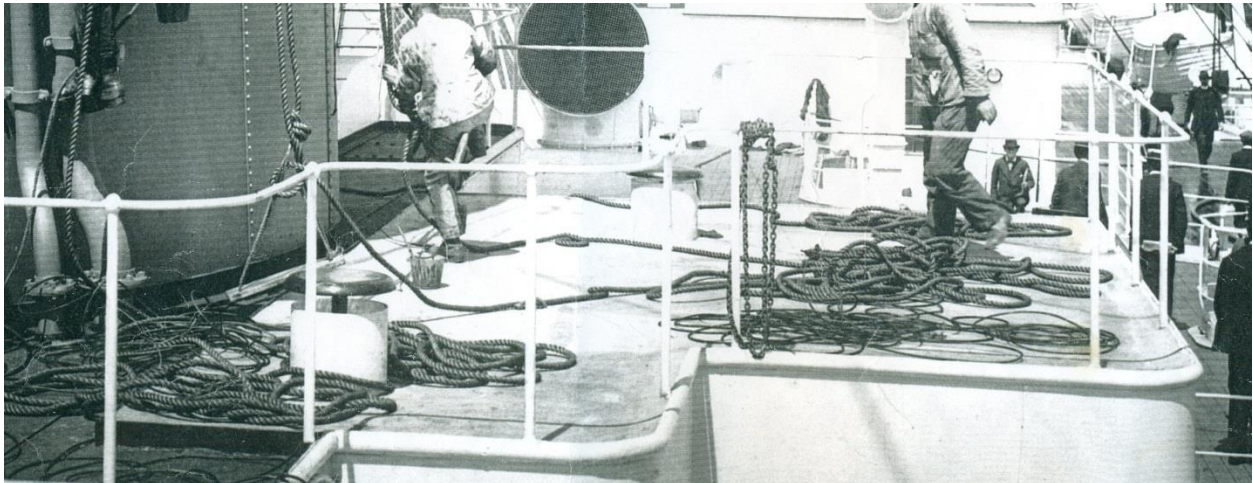
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Flat tongue in groove pine boards

Figure 8

Figure 9 show the completed officer's mess roof on *Olympic*.



Officers' mess roof of *Olympic*

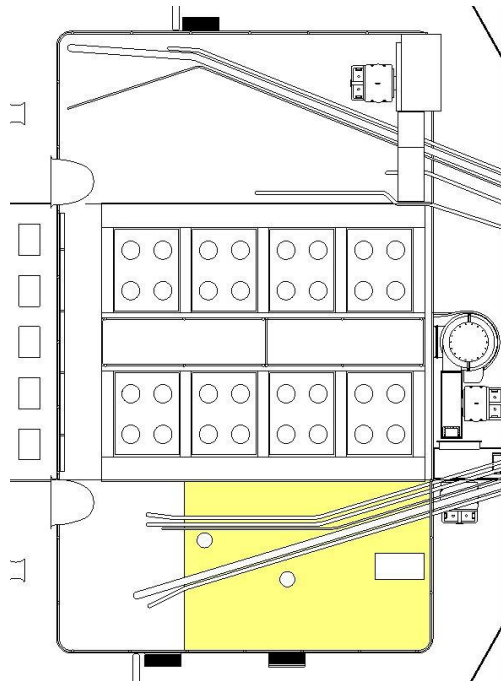
Figure 9

As can be seen in this photo the roof surface is bounded on the inboard side by steel angles. After the wood planks are bolted to the underlying steel frames, they are painted with a bitumastic paint to seal the boards then canvas is laid on the wet paint as was done on the navigating bridge roof. Since there are no grooves between planks, the canvas can be laid smooth. On this particular roof a covering board can't be used to seal the ends of the planks and canvas because covering boards are only used in applications where the planking overlaps the deckhouse. To seal the canvas and planking, several coats of enamel paint are applied. To seal the perimeter, cement was applied covering the perimeter up to the edge of the deckhouse and up to the inboard steel angles. Roofs of deckhouses which were occupied like

this one had a waterproofed wood roof applied to diminish the heat absorbing effect of a steel roof.

Engineers' Smokeroom Roof

Figure 10 show the roof area of the engineers' smokeroom.



Engineers' smokeroom roof

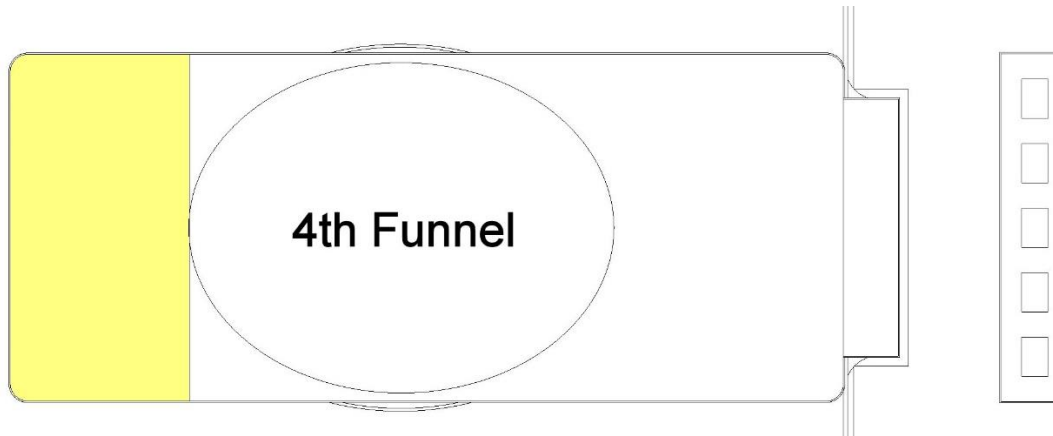
Figure 10

The installation of a waterproofed wood roof on the engineers' smokeroom is the most speculative of all the roofs which will be mentioned in this article. We don't have any Titanic photos and on Olympic the only photos we have are from the 1920's where the roof was painted in the same shade of dark gray as the metal roofs over the tank rooms. Therefore it is not possible to distinguish color. The reason it is believed that this roof may have been wood with waterproofing is because it has much the same function as the officers' mess and thus would need to have provision made to diminish the effects of a steel plated roof. If it indeed had a waterproofed wood roof then it would have the same construction techniques explained in the section about the officers' mess roof.

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Dog Kennel Roof

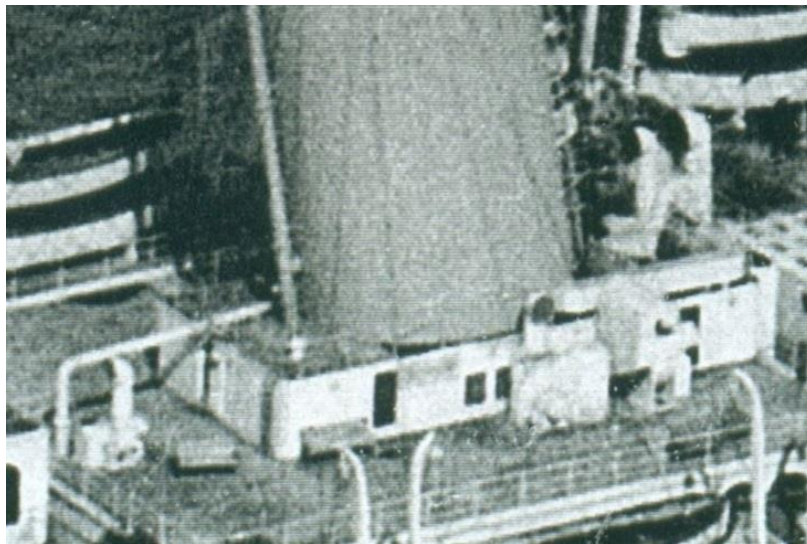
Figure 11 shows the area covered by a waterproofed wood roof over the kennels aft of the fourth funnel. The case for why this is most likely the kennels is explained in this article: [The Case for Dog Kennels on Titanic's Boat Deck](#)



Dog kennel roof

Figure 11

Figure 12 shows an aerial view of this area on *Olympic* after it had been converted to a dog kennel.



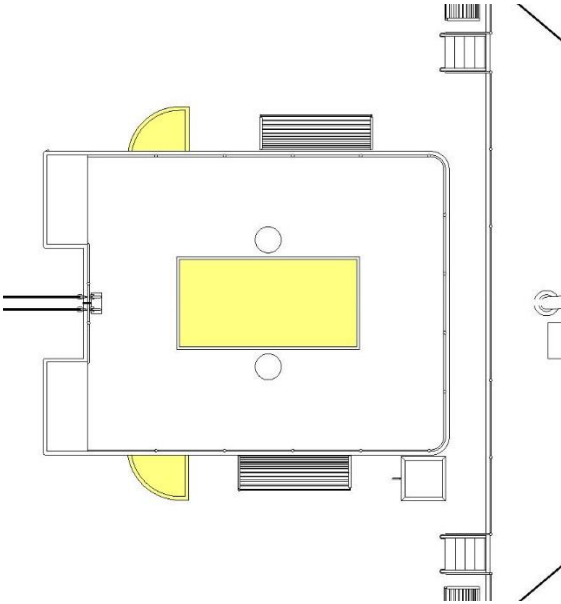
Dog kennel roof on *Olympic*

Figure 12

It can be seen that the kennel area aft of the fourth funnel is a lighter shade of gray than the dark gray steel roof forward of it. The method for creating this waterproofed wood roof would have been the same as for the officers' mess roof and the engineers' smokeroom roof.

Elevator Machinery Room Roof

Figure 13 shows the roof of the elevator machinery room over the second class entrance on the aft boat deck.



Elevator machinery room roof

Figure 13

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Figure 14 shows an aerial view of the roof of this elevator machinery room and how the color contrasts with the wood sheathed steel roof over the second class entrance.



Elevator machinery room roof

Figure 14

The reason we know that this roof was waterproofed wood construction is because of the Titanic wreck photo shown in Figure 15.



Elevator machinery room roof (*Titanic* wreck)

Figure 15

In the *Titanic* wreck photo we see that the pine roof boards have been consumed leaving only the steel roof beams. This roof treatment was done to help control heat build-up which could affect the functioning of the elevator machinery.

Second Class Entrance Weather Cover

Figure 13 showed the roof of the elevator machinery room. It also shows the semi-circular weather covers over the entrance doors to the Second Class Entrance. While this is not a roof in the strictest sense, it is included here because like the wing cabs, it is of wood construction and provides overhead cover. Figure 16 is a *Titanic* wreck photo showing one of these covers. As can be seen in the photo, the teak covering boards still exist. One aspect that is different about this cover is that it appears that there is still wood material inboard the covering boards. This would indicate that the planking was teak like the covering boards. The method of waterproofing would have been like the navigating bridge roof or the wing cabs.



Second class entrance weather cover (*Titanic* wreck)

Figure 16

Colors

The choice of paint colors for these waterproofed wood roofs is one of interest to the modeler. The problem is that it appears that these roofs have been painted differing colors from white to medium gray to dark gray. Some have theorized that these roofs needed to be painted light gray to help reflect sunlight to minimize heat build-up. Photos contradict this notion. In later *Olympic* photos we see many of these roof areas painted dark gray. If I were building a model,

my personal choice would be a medium gray for all of these wood roofs. The exception is that the covering boards should be painted white.

Conclusion

This article has sought to catalog the different waterproofed wood roofs on *Titanic's* boat deck. This was done to aid the modeler since these roofs probably require a paint treatment different than other roof areas. The construction methods were included for general information. Some of the construction methods given here may differ from earlier explanations given but after consulting period sources, I believe them to be correct.