

Paint Application to *Titanic's* Propellers

by Bob Read, D.M.D.

Introduction

In 2011 a debate arose on the *Titanic* Research and Modeling Association forum regarding whether or not paint was applied to any parts of *Titanic's* propeller assemblies. Lacking definitive color photos, the debate quickly deteriorated to interpretations of "colors" in black and white photos. This was an impossibility due to the fact that there are no colors in black and white photos. After this initial heated debate, the discussion lay dormant until recently when direct and circumstantial evidence was discovered which now makes the situation much clearer.

Propeller Components

In order to establish a common frame of reference, the individual propeller components which will be referenced in this discussion are shown in Figure 1.

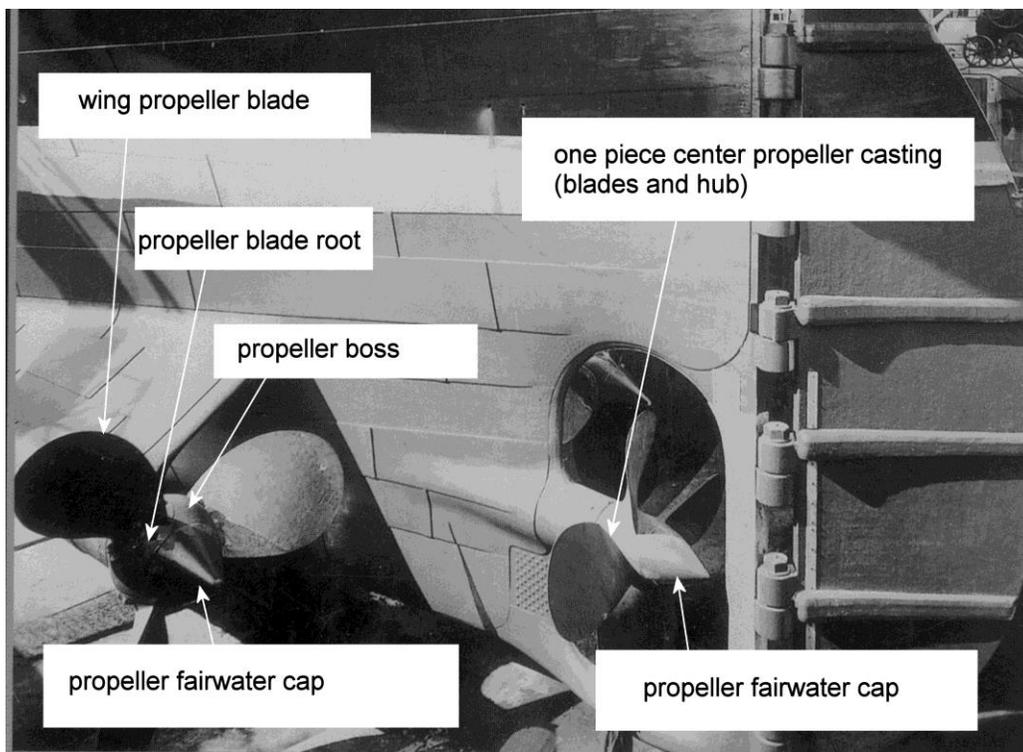


Figure 1

Wing Propellers

Figure 2 shows the photo evidence for paint which was applied to the wing propeller assemblies. As can be seen in this *Titanic* wreck photo, there are antifouling red paint remnants on the steel boss and the root of the bronze propeller blade.



Figure 2

The propeller component that is missing on the wreck is the fairwater cap. Since it is mated to the cast steel propeller boss, it is a reasonable assumption that the fairwater cap is cast iron/steel. As such, it is also reasonable to assume that the bare steel of the fairwater cap would be protected with antifouling red paint.

Center Propeller

The center propeller is a one piece manganese bronze casting consisting of the blades and the boss. The only separate part of the center propeller is the fairwater cap. Since the boss and blades of the center propeller are bronze, it was initially assumed that the fairwater cap would also be a matching bronze. Recent photo evidence from S.S. *Nomadic* has changed the thinking about the fairwater cap. In Figure 3 it can be seen that on *Nomadic* the propellers were the same cast manganese bronze as *Titanic*. It can also be seen that the fairwater cap is not bronze. It is clearly a ferrous metal which is most likely cast iron or steel. The reason this

evidence is significant is because *Nomadic* was built at Harland and Wolff which is the same shipyard where *Titanic* was built. *Nomadic* was launched within one month of *Titanic* so they are close contemporaries. It is reasonable to expect that the same shipyard practices would be in place for both ships. Therefore the most reasonable assumption is that the fairwater cap for *Titanic's* center propeller fairwater cap was cast iron/steel and was protected with antifouling red paint. In the *Nomadic* photo, the fairwater cap is unpainted. This is because the ship was in the process of restoration when this photo was taken.



Figure 3

Conclusion

The best current evidence regarding the paint applied to *Titanic's* propellers is:

Wing propellers: Propeller blade root, boss, and fairwater cap all painted antifouling red

Center Propeller: The center propeller had its fairwater cap painted antifouling red.

Figure 4 is a drawing showing where the propeller components were painted antifouling red.

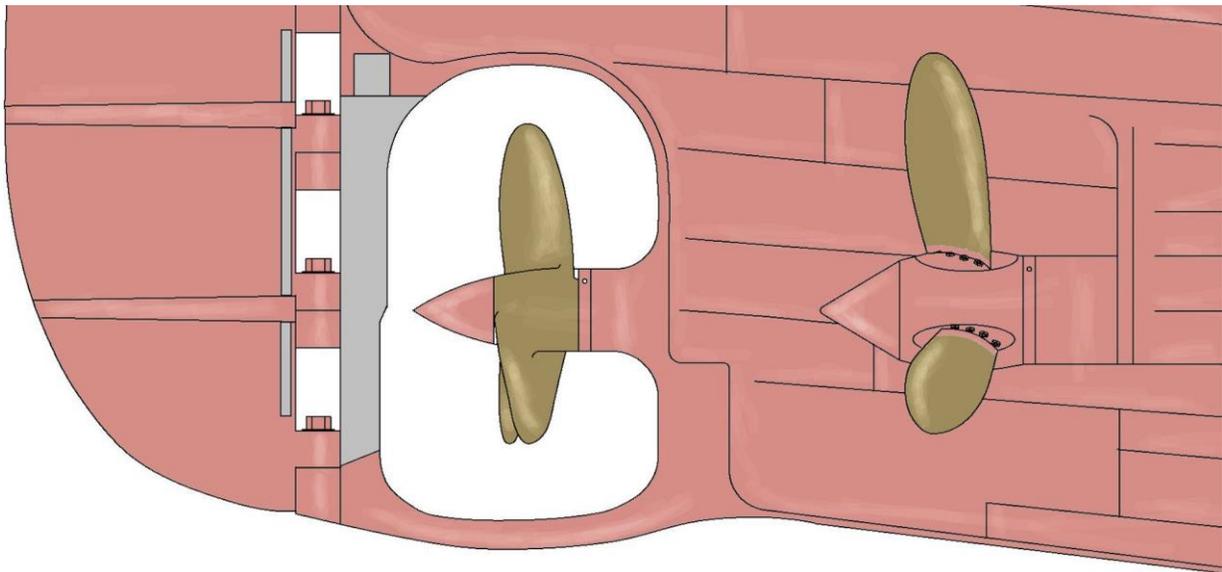


Figure 4

The only way to verify conclusively that the fairwater caps were painted antifouling red would be to remove marine growth obscuring the fairwater caps which are still in place on the HMHS *Britannic* wreck. At this point it appears that this is not likely to ever happen.