An Analysis of One of *Titanic's* Vent Trunk Intakes

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Introduction

On the aft face of *Titanic's* tank room deckhouse there is a ventilation trunk intake opening. The purpose of this article is to try to determine the configuration of this ventilation trunk intake. Because photo evidence is extremely limited, circumstantial evidence from *Olympic* will also be examined. In the process of examining the *Olympic* evidence, the configuration of the vent trunk intake in the same place on early Olympic will be postulated. There is very poor photo evidence of this vent trunk intake on *Titanic* and no photo evidence for early *Olympic* before her 1913 refit. *Olympic* evidence will be examined first which will help determine the *Titanic* vent trunk intake configuration with more certainty.

Olympic Post-1913 Refit

The strategy in this analysis will be to first examine the tank room deckhouse vent trunk intake on post-1913 refit *Olympic.* The reason for this is because we have a complete list of *Olympic's* ventilators up through her 1913 refit. We also have good evidence of the vent trunk intake at this time.

The tank room deckhouse vent trunk served four ventilators. In the *Olympic* electric fan ventilator inventory found in the so-called "Andrews Notebook", ventilators #12 and #12a used the outboard sides of the vent trunk to draw air from the forward end of the 1st and 2nd class galley on D deck. Figure 1 shows the description of these two suction ventilators.

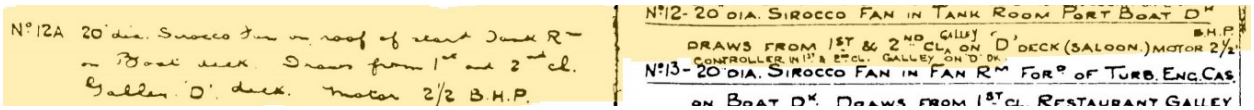

Figure 1

Descriptions of suction ventilators #12 and #12a using the vent trunk

Ventilator #12a was added to the starboard, aft end of the tank room deckhouse roof during the 1913 refit.

The other two ventilators which used this vent trunk were ventilators #30p and #30s. Their descriptions are seen in Figure 2

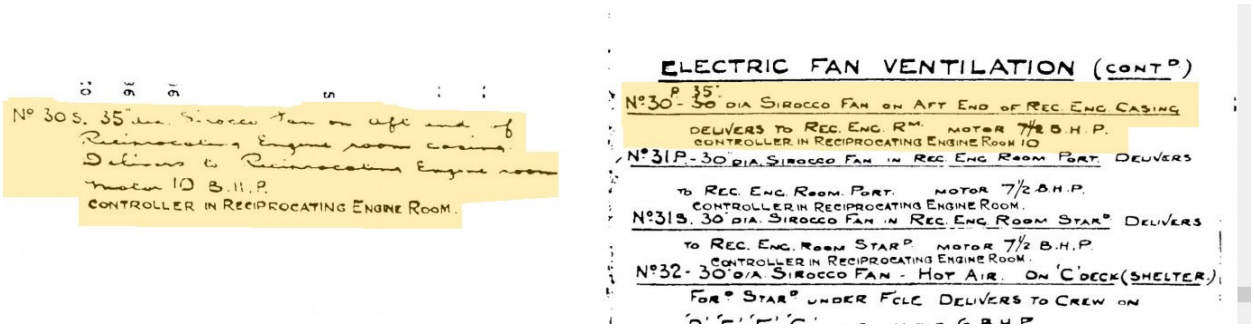

Figure 2

Descriptions of fresh air delivery ventilators #30p and #30s

These fresh air delivery ventilators were located on a platform in the reciprocating engine casing at the D deck level. They drew fresh air from the vent trunk which they sent downward through ducting to the reciprocating engine room. Figure 3 is a profile view showing the four ventilators.

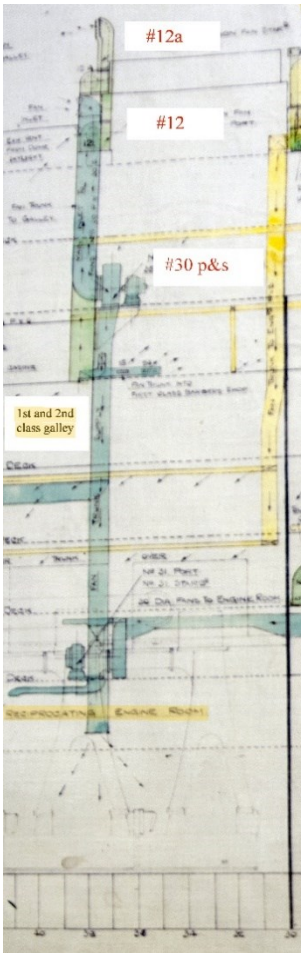

Figure 3

Profile plan of the four ventilators using the vent trunk

Areas shaded green were for the suction ventilators #12 and #12a. Areas shaded blue were for the fresh air delivery ventilators #30p and #30s. Figure 4 shows the division of the vent trunk at the boat deck level.

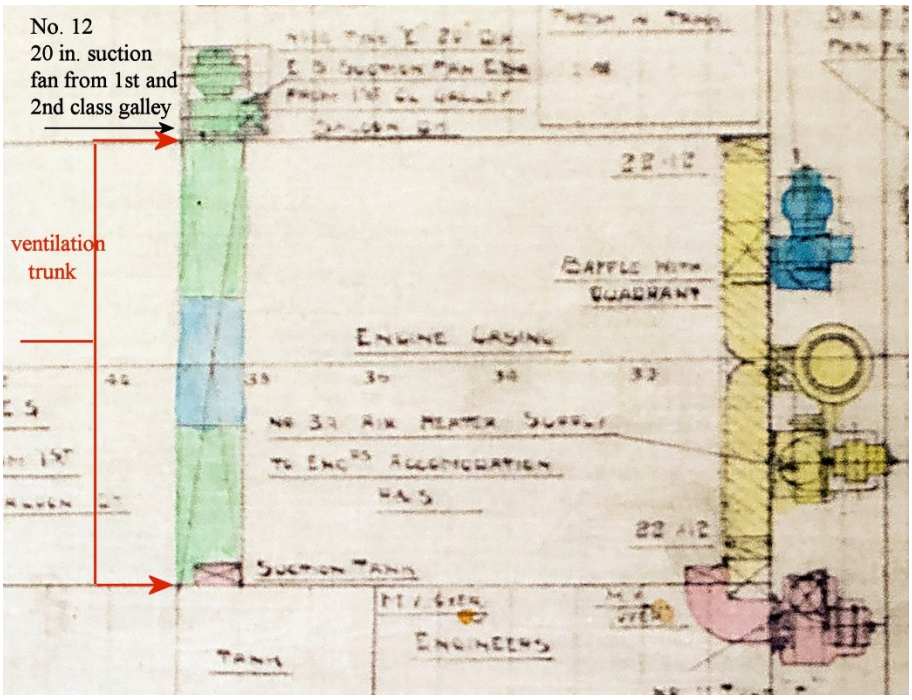

Figure 4

Division of the vent trunk at the boat deck level

The only ventilator which was added during the 1913 refit which used the vent trunk was ventilator #12a on the port, aft aspect of the tank room deckhouse roof. It ducted into the vent trunk at the tank room roof level. What also appears to have changed is that the vent trunk was divided along its vertical length into three internal divisions. The two outboard divisions were for the suction ventilators #12 and #12a. The center division was for the fresh air delivery ventilators #30p and #30s. One other modification appears to be that the internal division of the vent trunk went up the tank room deckhouse roof level on the starboard side. To seal this starboard division of the vent trunk, the starboard aspect of the vent trunk intake was eliminated. This made the intake asymmetric with respect to the fore and aft midline.

Figure 5 show the tank room vent trunk intake in 1913.

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Figure 5

Tank room vent trunk intake 1913

Figure 6 shows a more unobstructed view of the tank room vent intake during WWI.

Figure 6

Tank room vent trunk intake during WWI

Figure 7 shows the divisions of the tank room vent trunk and the configuration of the tank room vent trunk intake. Green areas indicate suction and blue areas indicate fresh air delivery.

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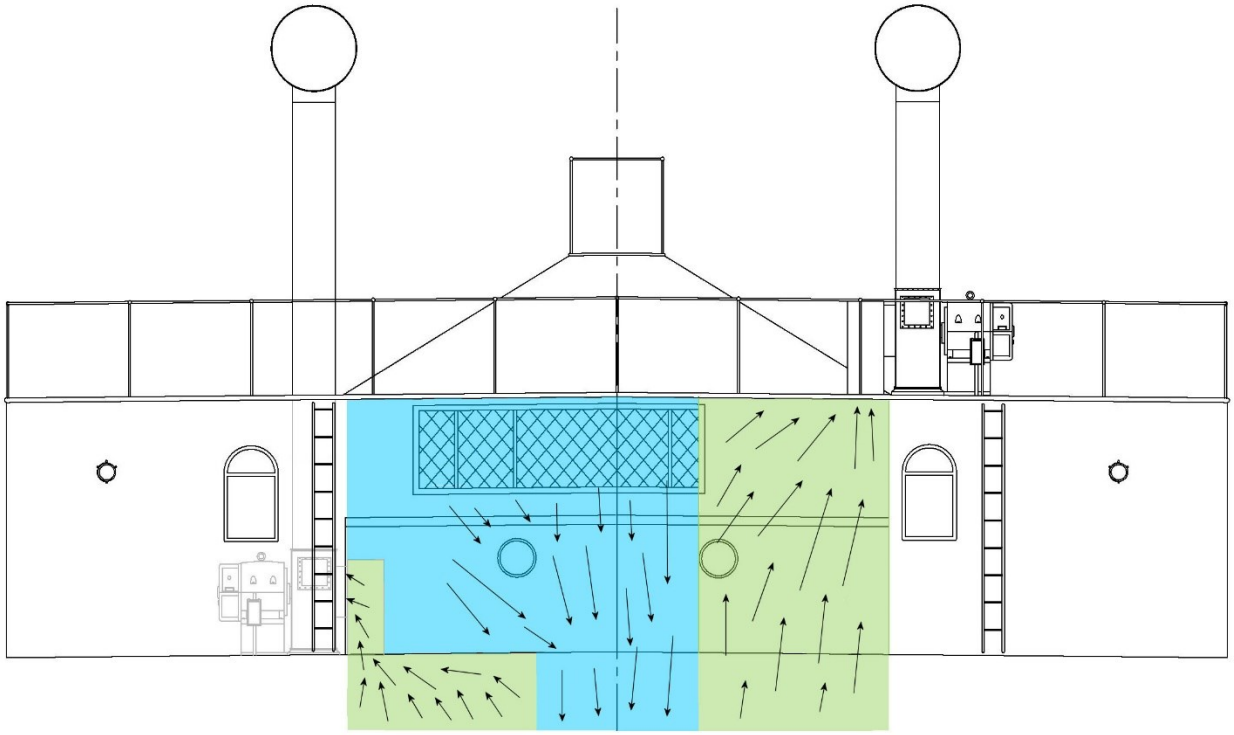

Figure 7

Tank room vent trunk and intake configuration post-1913 refit *Olympic*

Olympic 1911- pre-1913 refit

There are no known photos at this time which show the vent trunk intake on early pre-1913 refit *Olympic.* Therefore, educated speculation will have to be utilized. If we remove the 1913 refit modifications to the vent trunk, we would eliminate ventilator 12a and the internal divisions of the vent trunk. It seems that this vent trunk and associated intake were originally primarily for providing fresh air to the reciprocating engine room in a similar manner that the stokehold intakes provided air to the boiler rooms. The exhaust of air from the 1st and 2nd class galley was accomplished by two 20-inch suction ventilators, #12 and #13. Suction ventilator #13 was located in the fan room forward of the turbine engine casing at the boat deck level. This vent exhausted through a duct into the 4th funnel. These two suction ventilators for the 1st and 2nd class galley were found to be inadequate and were supplemented with additional suction ventilators later on *Olympic* and from the beginning on *Titanic.*

Rather than dedicated divisions in the vent trunk, I believe that the vent trunk was dedicated primarily to the fresh air delivery ventilators #30p and #30s. The only exception was the ducting from suction ventilator #12 which descended through the vent trunk to the 1st and 2nd class galley. Therefore, I believe that the width of the intake for the vent trunk was

symmetrical such that the port extent of the intake was identical on the starboard side on early Olympic. This proposed configuration of early *Olympic's* vent trunk and intake are shown in Figure 8.

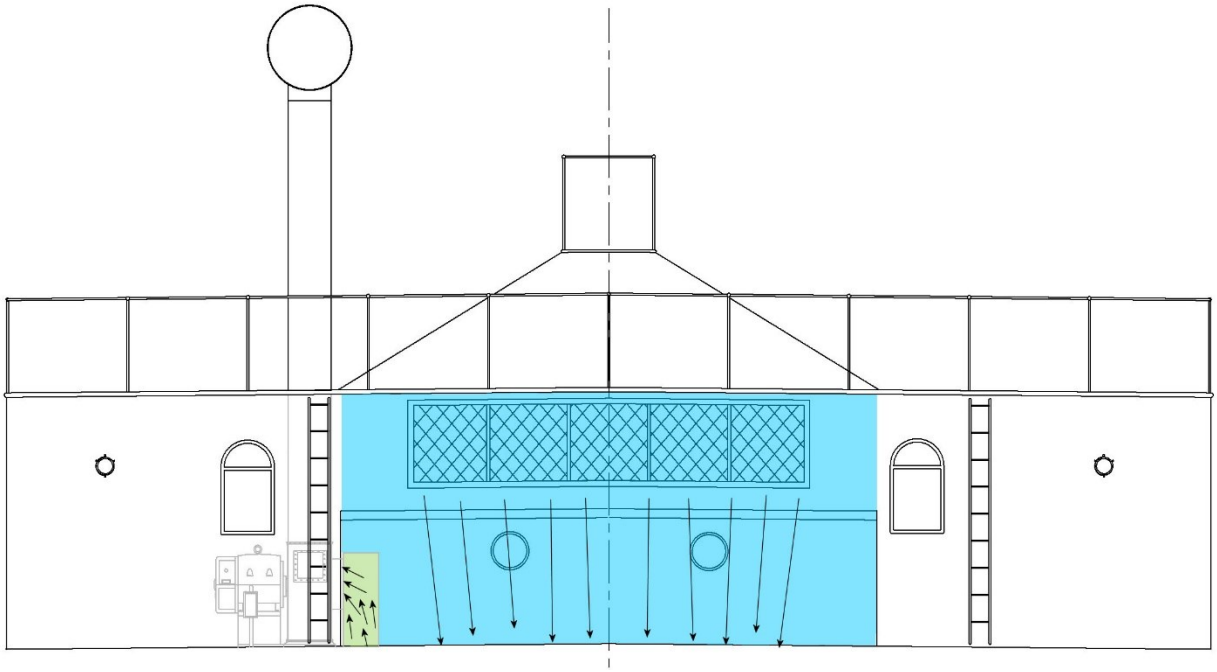

Figure 8

Tank room vent trunk and intake configuration of early pre-1913 refit *Olympic*

Titanic

Our photo evidence from *Titanic* of the configuration of the vent trunk intake is very limited. Figure 9 shows what probably is our best photo evidence.

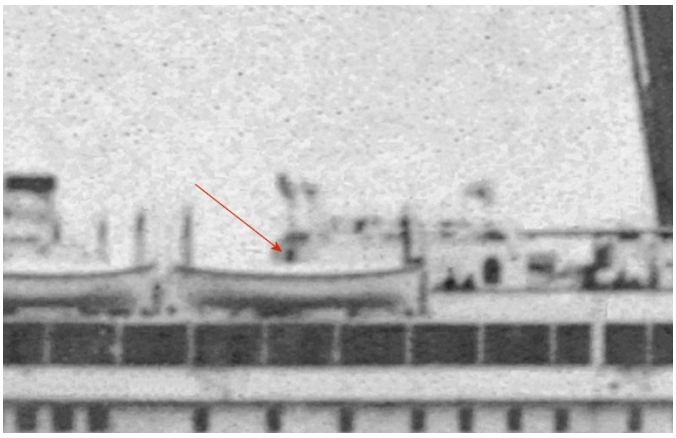

Figure 9

Titanic vent trunk intake

The intake of the vent trunk appears quite narrow. We do not have an electric ventilator fan inventory for *Titanic* like we have for *Olympic*. However, from photo evidence it appears that *Titanic* had suction ventilators similar to *Olympic's* ventilators #12 and #12a. The difference appears to be that unlike *Olympic's* ventilator #12a which was on the roof of the tank room, *Titanic's* similar ventilator was inside the tank room on the starboard side at the boat deck level. There is no real reason to believe that the fresh air delivery fans #30p and #30s on *Olympic* weren't duplicated on *Titanic.* I believe that the vent trunk on *Titanic* was divided into three separate trunks from the tank room roof level down. The difference on *Titanic,* I believe, was that the port division of the vent trunk extended to the tank room roof like post-1913 refit *Olympic's* starboard side. This left the center vent trunk on *Titanic* as the only one of the three divisions which had an open intake. Figure 10 shows what I believe was the vent trunk and intake configuration on *Titanic.*

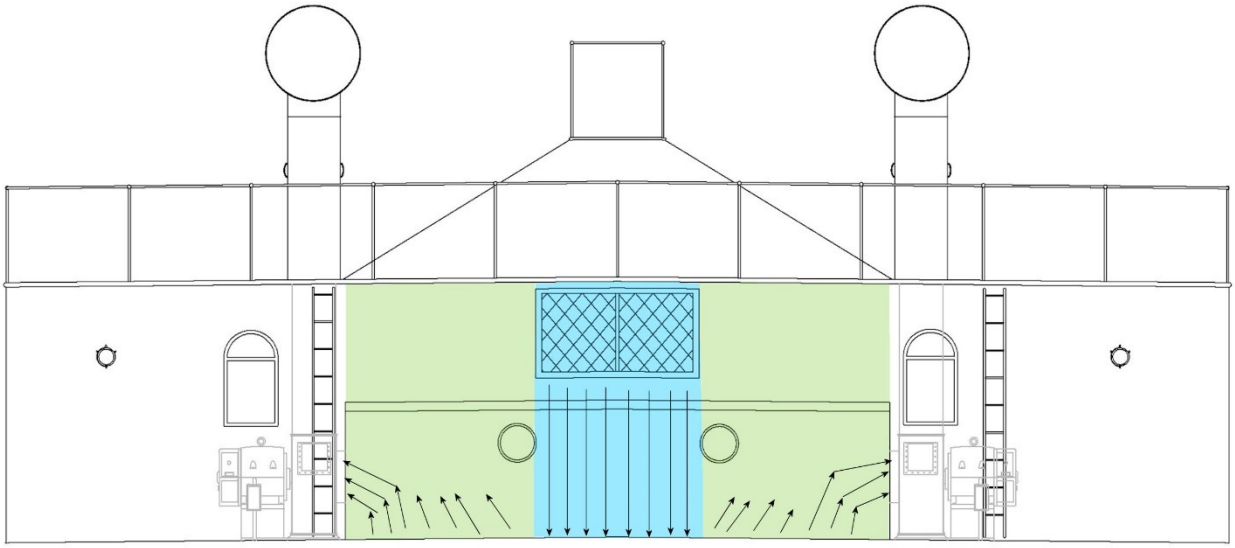

Figure 10

Tank room vent trunk and intake configuration *Titanic*

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Figure 11 shows a comparison of the tank room vent trunk intakes on early *Olympic,* post-1913 refit *Olympic,* and Titanic.

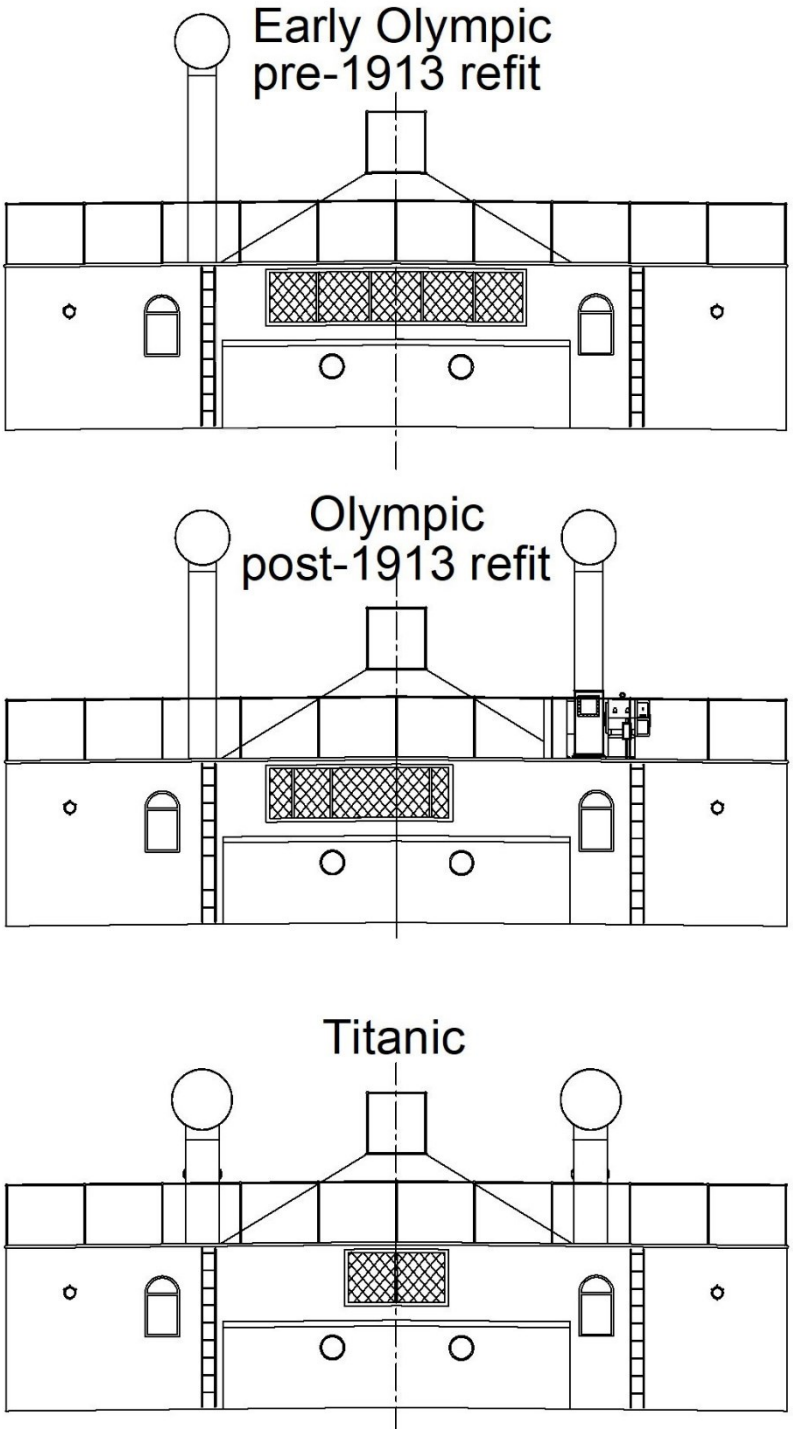

Figure 11

Comparison of vent trunk intakes

Summary

This article has examined the configurations of the tank room vent trunk intakes on early *Olympic,* post-1913 refit Olympic and *Titanic*. Much of the reasoning used to determine the configurations of early *Olympic* and *Titanic* were done through the use of circumstantial evidence from post-1913 refit *Olympic.* The final configurations of early *Olympic* and *Titanic* are speculation based on what I believe is the best evidence we have available at this time.