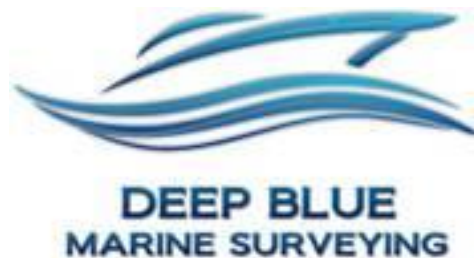


**For and on behalf of Mr. Jamie Douglas**

VESSEL SURVEYED "Ashanti"  
DATES OF SURVEY: August 24 2016  
REGISTRATION:  
H.I.N. AU-TWAO35736 D09



## **Purpose:**

To provide information to the client concerning the condition of the vessel's for continued insurance purpose.

## **Scope and Limitations**

For an agreed fee, an inspection for defects was completed on the vessel which are covered by the under mentioned headings with explanatory notes as set out in small ship surveyors Inc. (MSA) standard of reporting on areas which are accessible at the time of the survey.

This survey did not include areas which are inaccessible by normal or non-evasive and non-destructive means. Examples of such areas are behind molded liners, paneling, under engines, or ballast of any permanently built in items.

## **Description:**

The vessel "Ashanti" is a Gaffed Rigged Schooner; layup of the hull is by way of Paulownia Timber "Kiri" with the use of the West system strip planking modern way of boat building applied.

Solid timber was observed to be a combination of Oregon, Paulownia Timber "Kiri" for all framing and structural reinforcements coupled with Marine ply and cedar to compliment.

The Deck and superstructure is by way of combination of Oregon and Paulownia Timber "Kiri" that has been sheathed over to provide an overall protection to the material used for construction.

Mast and spars are of Oregon timber, with the standing rigging made up of a combination of stainless steel and galvanized wire, preservation using Denso Tape was applied to all galvanized stays, secured and fastened by way of bronze chainplates and Tabernacles.

## **External presentation of the hull:**

Where inspection was completed without carrying out destructive testing or withdrawing samples of the vessel I did not find any significant deterioration or damage during the external inspection to warrant further investigation.

The hull was checked for the following common defects.

- Wet/dry rot
- Fungal rot
- Impact damage
- Delaminating of the timbers
- Signs of grounding damage
- corrosion

The method used to check the hull was initially checking the hull visually for any signs of the above common defects. A sounding using a soft medium faced hammer to check for the above common defects was also carried out.

The hull was observed have very little excess growth an indication she is being used and well maintained.

The through hulls were reasonably clear of growth with nil soft spots at the edges.

Nil sign of any deterioration from electrolysis.

Transom was free of damage and soft spots at the edges.

The full length keel that was built into the vessels hull; was free of any signs of damage from running aground.

The above water line sections of the hull were also free of any signs of damage from berthing operations or other vessels.

Minor movement of the planking noted on the starboard side. This does not impact on structural integrity.

I did not observe any defects to suggest the workmanship at the time of build was either poor or inconsistent. The overall finish of the hulls from an external view was to a high standard.

### **Deck and Superstructure:**

The vessels deck was finished with marine grade non slip paint and observed to be in good condition. I did not observe any excessive flexion or delaminating.

The coach house was also observed to be in good condition.

The deck was self-draining to allow water to flush away from the cockpit keeping the cockpit free of excess water that may present in a heavy sea, the cockpit was also self-draining.

Both port and starboard side gunwales and lifelines were all observed to be in good order, well secured and at a height to keep a crew member reasonably safe from going overboard keeping in mind safety of lives at sea.

An addition to the vessel was a fixed Bimini with drop down clears and sun shades enclosing the cockpit, serving to keep the crew both dry and cool whilst at anchor or underway. This did not impact on the aesthetically appealing timber work already in place.

The rigging was a combination of galvanised wire and stainless steel with wooden blocks and lines. The preservation of the rigging was well thought out and was observed to be completing the expected role well.

The bowsprit was retractable to allow a short berth and also more reach whilst sailing, nil damage to the securing points or movement observed.

Sails were in bag or set to fly, all observed to be free of damage.

**NOTE: Sails and rigging was inspected as a static inspection only, for a more detailed inspection of the rigging it would be recommend a qualified rigger complete this or the sails set whilst underway to allow an inspection whilst the rigging is underload.**

However I can confirm the vessels deck and coach house and associated fittings were all in good order, I did not observe any damage or build defects.

### **Steering, Stern gear:**

Navigating the vessel was by way of a tiller and keel hung transom that was designed to maximise the flow of water passing over the vessels keel.

On testing the rudder I did not observe any degree of movement or flexing from poor fitment or damage. The lower securing point, possibly marine grade stainless steel was being cleaned at the time of inspection with the cathodic protection set up and observed to be doing the intended job.

The rudders stock tube, securing point was also of marine grade stainless steel and observed to be well secured to the vessels hull with cathodic protection also in place.

The tiller was observed to be in good order with an ability to fold it to astern, was set up to allow free movement within the cockpit.

Both shaft and the brass manganese propeller were free of damage and observed to be in good order. I did not find any excessive play or movement, upon testing the shaft by way of force.

The propeller was observed to be correctly secured to the shaft on the day of inspection.

A new anode was to be fitted to the vessel shaft.





The photo on page four allows the observer to view both the condition of the gear, as well as to observe the work that has and is being completed as part of routine maintenance.

### **Internal Inspection:**

Inspection of the internal section was by way of lifting deck plates and removing paneling within the vessels storage areas to allow at best a view of the structural areas of “Ashanti”.

The mast step was observed to be well designed for the vessel with the decks framing forming part of the masts structural support both as a base and for any movement. I did not observed any signs of cracking or separation of the joins.

The chain plates securing points for both the main mast and the foremast were all in good order. Nil signs of over tension or damage from use of the vessel in extreme weather.

The bilge areas both within the main cabin and forward of the head were all observed to be well finished and the internal sheathing to preserve the timbers in good order, nil delaminating observed. The below photo provides the viewer with the combination of automatic and manual bilge pump arrangement aft section only. The sensor for the alarm panel can also be seen as well as the sheathing of the timber work.



The full height bulkhead forward of the mast and aft of the vessels head was observed to be free of movement and or warping.

The plumbing was observed to be in fair condition with several seacocks in need of cleaning and possible errors with the type of metals used for fastening of the hoses, with some fasteners in need of replacement. I did not observe electrolysis of the timber or backing plate from incorrect bonding.

NOTE: Dissimilar metals can be used in marine settings, however any degree of moisture and or allowing them to come in connection with each other will cause a degree of corrosion and if left will cause the part in concern to fail. Refer to the below photo.



Internal inspection of the vessel shaft and stern tube found it to be free of corrosion and any signs of water ingress.

**NOTE: Structural integrity of the vessel can be confirmed upon inspecting the internal sections of the vessel; however I cannot reflect the degree of workmanship that can be viewed once entering Ashanti's main cabin. The degree of craftsmanship that has gone into the overall fitout of the accommodations, galley and head is above the expectations of an amateur boat builder.**

**The use of quality fittings, bronze and brass for the vessels windows, hatches, seacocks and plumbing has been enhanced by the overall finish.**

## **Specifications:**

The vessel was built by a Mr. Colin Aburrow using the West system by way of strip planking and marine epoxy.

The design is a Gaffed Rigged Schooner with an ideal of attaining a look of an aged vessel built on modern lines and technique.

Her overall length is 32 feet not including the bowsprit, with a maximum beam of 10 ½ feet,

She has inbuilt water tanks as well as a galley that operates on gas. Installation was completed by a qualified gas installer.

Holding tank for affluent also installed within the vessels head. Plumbing all in good order and clearly marked.

The vessel has accommodation for four adults with comfort with a head and shower to at best allow for lengthy stays away from the mainland.

## **Engine:**

The engine fitted is an electrical drive THOOSA 9000 48 V system. The system uses a permanent magnet motor; set up in a gearing console made in stainless steel and is regulated by a 4-quadrant motor controller electric drive.

The manufacturers of this type of arrangement for vessel propulsion state, it is both reliable and cleaner for the marine environment.

Evidence resourced from both online resources and current vessel owners is that this type of arrangement has many positives with the vessel being powered by a near silent means of propulsion and more efficient based on the way the propulsion can be managed. This is accomplished by the motor controls and setting the amount of power it receives is by adjusting the voltage input leaving very little to waist, using the vessels battery arrangement to its full capacity but at the same time keeping them in a charged state.

Power can be delivered when it is needed and how much the vessel needs at the time of maneuvering without the need to idle at set RPM's that a combustion engine would be required to do before power is delivered.

The overall yearly maintenance is significantly reduced; this does not impact on the reliability of the engine or capability.

Replacement of the main drive can be completed by the owner and according to the fitting guides can be completed within a day, once again proving to be significantly cost efficient to both fit and or replace with less down time and more time of the water.

**Engine arrangement and fitment observed to be in good order securing hardware observed to be in place with nil signs of movement and or corrosion from stray currents.**

### **Safety equipment:**

Required safety gear observed to be on board

- Epirb
- Portable fire extinguisher
- Bilge pumping and alarm arrangements both manual and automatic all operational upon testing them 24<sup>th</sup> of August 2016.
- Marine radios
- Life vests
- Offshore flares

### **Windlass and Anchor:**

Chain locker is located forward of the vee berth with the controls for the windlass on deck on the bow. Testing of the Windlass was not carried out. A complete inspection would require the link to be laid out on deck or where practical. This would allow for the chain locker arrangement to be inspected as well as test the operational status of the windlass and electrical components.

The vessels anchor Delta plough type, was sighted to be in place on deck. Static inspection found it to be in good order and suitable for the vessel.

Power for the windlass is by two standalone twelve volt batteries located at deck level within the vee berth.

### **Charging:**

Charging is by way of a combination of a 30 amp 240 volt charger running from shore power or via a 10 amp charger powered by a 2kva portable generator.

This is complemented by 400 watt solar panels.

The vessels battery bank is currently eight x six volt deep cycle batteries suitable for solar charging and the running of the vessels equipment.

Also the design of the electric drive engine is unique to the combustion type due to the fact it can charge the vessel whilst sailing and possibly at anchor pending upon the tidal flow.

**All wiring appeared to be in good order, testing was not completed as I am not a qualified marine technician for the purpose of electrical installations.**

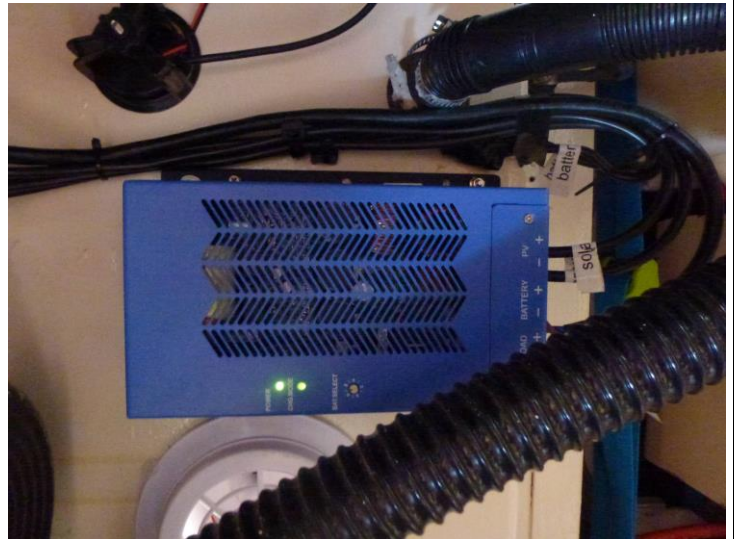


I can confirm the vessels power board photo below to the starboard side powered up and the bilge and alarms were in working order, bilge powered up and power was supplied. Heavy duty fuse breaker and solar converter refer to photos below in place and also observed be in good order.



Switchboard, bilge and high water alarm.

Solar inverter powered up and wiring clearly labelled.



Heavy duty fuse holder and dual 48V fuse. As per photo nil stray wires.



## Summary:

The vessel "Ashanti" was inspected whilst she lay in in her cradle at Fremantle Sailing Club, Perth Australia. The prevailing weather conditions were warm with a slight onshore breeze blowing.

The owner of the vessel Mr. Jamie Douglas was present on the days of the inspection.

Routine maintenance and minor repairs were being carried out with the overall condition of the vessels hull observed to be in very good condition.

Internal inspection found "Ashanti" in a very well kept condition with the general housekeeping and routine maintenance being completed on a regular basis.

The external appearance of "Ashanti" gives the viewer a vessel that has been cared for to a high degree, the current upkeep is of a high standard of which is reflected in the overall high aesthetic appeal with traditional lines of wooden boat building materials and technique on display.

I can only recommend that the current upkeep and housekeeping be continued as this will not only keep "Ashanti" in her current state but will also preserve an example of amateur boat building for many years.

Replacement valuation of "Ashanti" given the current market, Industry and vessels of a similar type and make would be in the range of \$265000.00 to \$285000.00 this would be inclusive of Hull, Deck, Engine, Sails, Rigging and associated gear.

- Australian Standards for recreational boats.
- Marine Surveyors Association MSA (Inc)

Should the recipient of this report require additional information please do not hesitate to contact me at the following email address;

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