

# Murray F Reid

Marine Surveyor and Consultant

21 Blue Gum Lane  
Kerikeri 0293  
Bay of Islands  
NEW ZEALAND

Phone: +64 9 407 8988  
Mobile: +64 21 233 0487  
survey@marinesolutions.co.nz

## CONDITION REPORT (HULL EXTERIOR)

10 February 2015

Catamaran **SAMURI**



**Samuri** at Norsand Boatyard, Whangarei, prior to re-launching on 10 February 2015.

10 February 2015

Christian Nigg  
Kohlgraben 3  
6370 Stans  
SWITZERLAND

Mob: 027 834 4014  
Email: info@samuri.ch

Re catamaran **Samuri** - information provided for whom it may concern

Further to the inspection I carried out on *Samuri's* hull exteriors and appendages below the waterline on 23 January 2015 with the vessel out of the water sitting on blocks at Norsand Boatyard, Whangarei, (refer to the attached report from page 9) I inspected the catamaran again on 02 February - prior to new antifouling coatings being applied - and on 10 February 2015 - prior to re-launching - to check that areas identified as requiring attention during the course of the 23 January inspection had been attended to.

On the 02 February, at the owner's request, I also carried out an inspection of the catamaran's hull exteriors above the waterline and the underside of the bridge-deck. The purpose of the inspections was to provide an independent report on the condition of the vessel's hull exteriors, above and below the waterline, for any prospective buyer requiring this. I did not attend a sea trial or conduct any check on the engine, mechanical, electrical or electronic systems in operation.

The items that were identified as requiring attention during the course of the 23 January inspection that had been attended to at the time of the 02 and 10 February inspections included:

**Cutless bearings**



**Photo one**

At the time of the 02 February inspection the port and starboard P-bracket Cutless bearings had been replaced. No undue movement of the shafts in the new bearings was noted.

**Port side skeg to hull joint**



**Photo two**

At the time of the 02 February inspection the port side rudder skeg to hull joint had been ground-out and filled.

## Rudders

At the time of the 02 February inspection, as a further check on whether there had been water ingress into the starboard rudder core through the rudder stock to blade joint, a 5mm diameter hole was drilled into the underside of the rudder blade to a depth of approximately 50mm. There was no evidence that the core was wet and the owner subsequently filled and sealed the hole. The port rudder was not checked.



**Photo three**

The arrow indicates the location of the exploratory hole drilled into the underside of the starboard rudder blade. No signs of water in the area of the hole indicated that there had not been any water ingress into the rudder core through the rudder stock.



**Photo four**

The photo shows the port rudder after antifouling (10 February 2015).

## Through-hull strainers

At the time of the 02 February inspection the owner had removed all of the through-hull strainers and was in the process of filling some of the strainer fastening holes in the hull with epoxy filler in preparation for re-bedding and re-fastening the strainers onto the hulls into position over the through-hull fittings. At the time of the 10 February inspection it was noted that the strainers had been re-fitted (*refer to photo five on page 4 below*).



**Photo five**

Photo five shows the strainer - located starboard hull outboard amidships - refastened to the hull. When observed it was noted that the strainers they were not fully mated up to the hull, but were securely fastened.

**CONDITION OF THE HULL EXTERIORS ABOVE THE WATERLINE**

During the course of the 02 February inspection the hull exteriors above the waterline between the waterline and the toe rail at the deck edge, including the exterior hull to deck joint and the underside of the bridge-deck exterior, were all visually inspected and percussion sounded (tapped lightly with a small hammer).

No significant defects were identified in the areas inspected. Hammer sounding did not indicate any areas of core separation, de-lamination or voids. The forward beam attachment fittings and the shroud chainplates appeared to be secure and in good condition and no stress cracks in the gelcoat were noted in the areas of the hulls adjacent to the beam attachment fittings or chainplates.

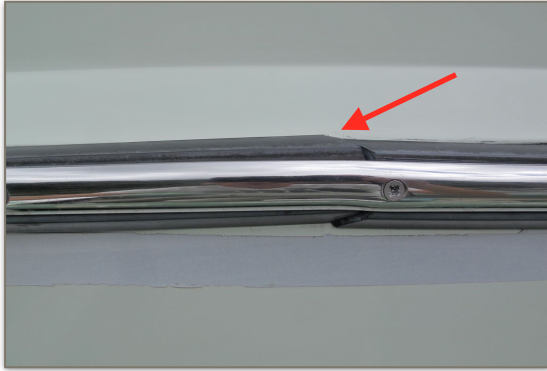
**Minor defects**

The hulls appeared reasonably fair and the gelcoat surfaces in good serviceable condition although, commensurate with the catamarans use, several minor defects were noted. These would not necessarily affect the seaworthiness of the vessel and could be monitored and attended to as necessary during scheduled maintenance. They include: areas of minor impact damage and wear on the aluminium toe rail at the deck edge, areas of minor impact damage to the rub-rail, superficial chips and abrasions in the gelcoat on the outboard sides of the hulls and on the underside of the bridge-deck and a number of areas on the underside of the hull to deck joint with hairline stress cracks in the gelcoat.



**Photo six**

The arrow indicates an area of minor damage on the aluminium toe rail, starboard side aft of amidships.



**Photo seven**

The arrow indicates an area of damage to the rub-rail on the starboard side aft of amidships.



**Photo eight**

The arrow indicates one of a number of hairline cracks in the gelcoat on the hull to deck joint, hull flange, adjacent to a fastening bolt on the port side forward of amidships.

It was also noted that a number of the stainless steel fastening bolts (that fasten the toe rail to the deck edge and fasten the hull to deck joint) are showing signs of light surface rust staining. It is recommended that the fastenings and the area on the underside of the hull to deck joint are monitored and, if necessary, attended to during scheduled maintenance.

Several small areas of previous gelcoat repair on the hulls were noted (evident as patches of a slightly different colour to the surrounding gelcoat), including several small areas on the inboard sides of the hulls forward and the forward end of the bridge deck.

At the time of the 10 February inspection it was noted that the owner had carried out several small gelcoat repairs to minor abrasions in the gelcoat on the hulls and a repair to damage caused by the anchor chain chafing through the FRP anchor rode tube, which is located on the port side of the central bridge. A small crack in the gelcoat - in the area of a previous gelcoat repair located on the starboard out board side under the window aft of the shroud chain plate - had also been repaired and the hulls buffed and polished (*refer to photo nine below*).

**Photo nine**

The arrow indicates the location of the area described above.



It was noted that the lower sections of the prod stay attachment fittings, which are fastened to the inboard sides of each bow above the waterline, have pulled away slightly from the hull surfaces due to the upward pull from the stays. The owner advised that he had been aware of this for some time and that he had not noticed any movement or any seepage on the inside the hulls through the fastenings securing the fittings. It is recommended that the fittings are monitored and attended to if necessary (*refer to photo ten below*).



**Photo ten**

The arrow indicates the gap between the hull and the lower section of the port side prod stay attachment fitting. It may be desirable to replace both the port and starboard fittings with ones that are better designed to take the angle of the load from the prod stays.

If you, or any prospective buyer, have any questions please do not hesitate to contact me.

*During the inspections of Samuri I checked the general condition of the catamaran's hulls below the waterline, where accessible, including appendages and through-hulls, and the hull and bridge deck exteriors above the waterline and it is only these areas that I have specifically commented on. It was not possible to see some parts of the vessel during the inspection and no responsibility can be accepted for hidden or latent defects. Woodwork or other parts of the structure which are covered, unexposed or inaccessible were not inspected and I am therefore unable to report that any such part of the structure is free from defect. This report represents the condition of the vessel on the date shown. No opinion is offered as to the future condition or serviceability of the vessel, its machinery and other equipment installed on this vessel. This report is the unbiased opinion of the undersigned, but it is not to be considered an inventory or warranty of the vessel either specified or implied.*

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'Murray F Reid'. The signature is stylized and cursive.

Murray F Reid  
Marine Surveyor

The photo below shows ***Samuri*** at the time of relaunching at Norsand Boatyard, Whangarei, on 10 February 2015



**23 January 2015 report on the condition of the catamaran *Samuri's*  
hulls and appendages below the waterline**



23 January 2015

Christian Nigg  
Kohlgraben 3  
6370 Stans  
SWITZERLAND

Mob: 027 834 4014  
Email: info@samuri.ch

### Re catamaran *Samuri*

Acting on your instructions I inspected the catamaran *Samuri* on on 23 January 2015 with it out of the water sitting on blocks at Norsand Boatyard, Whangarei. The purpose of the inspection was to check the general condition of the exteriors of the vessel's hulls and appendages below the waterline for you and provide an independent report on the condition of these areas for any prospective buyer requiring this. I also conducted a brief inspection of both hull interior bilge areas in order to make an overall assessment of the hulls below the waterline. I did not attend a sea trial or conduct any check on the engine, mechanical, electrical or electronic systems in operation.

A *Recommendations* section is included on page 4.

*Samuri* is a production PDQ Antares 44i sailing catamaran reportedly launched in 2007. It has a fractional sloop rig with a prod, fixed keels and skeg-hung rudders. The auxiliary engines are two Yanmar 3YM30 three-cylinder 29 hp marine diesels with shaft drives and 16" MaxProp feathering propellers.

#### **Principal Dimensions (approximate)**

Length overall	44'	13.4	metres
Length on the waterline	43' 5"	13.25	metres
Beam	21' 75"	6.6	metres
Draught	4'	1.2	metres

#### **Registration**

*Samuri* has the hull number CA-QPQ44024D708. The vessel has Swiss registration with the official registration number as 05401, the owners as Christian Andreas Nigg and Evelyne Nigg and the home port as Basel.

#### **Construction**

The catamaran is built and fitted out to a good professional standard. The hulls below the waterline are of solid FRP with foam core composite FRP above the waterline. The deck moulding is also of foam cored FRP.

The internal structure of the catamaran utilises glassed-in structural bulkheads and partitions of composite foam FRP and moulded FRP liners.

The skegs are of FRP with the skeg-hung rudders of FRP composite with stainless steel stocks and gudgeons.

### **Condition of the hulls and appendages below the waterline**

The hull exteriors and appendages below the waterline including, the keels, rudder skegs, rudders, shaft struts, accessible sections of the propeller shafts in-situ, and the propellers were all visually inspected.

The hulls, keels, skegs and rudders were also percussion sounded (tapped lightly with a small hammer). Moisture meter readings were taken with a Tramex Skipper Plus moisture meter.

At the time of the inspection the owner was in the process of sanding back the Coppercoat antifouling coatings on the hulls in preparation for applying new coatings of primer and antifouling. In some areas the Coppercoat had been sanded back to expose the underlying primer coats. The owner advised that he had done this to remove areas of small bubbles in the Coppercoat that had been caused by solvent entrapment during previous application of the coatings.

The sanding preparation for the new coatings appeared to have been done to a good standard by the owner.

The hulls were found to be generally fair, with no voids, areas of de-lamination or any visible gel-coat or laminate blisters noted. The hulls, keels, skegs and rudders all appeared free of impact damage.

There was no signs of movement at the hull to keel joints or at the starboard hull to skeg joint. A hairline crack was noted in the cove on the out-board side of the port skeg to hull joint. The skeg was vigorously shaken from side to side and no undue movement between the skeg and hull was noted. The owner advised that at a previous haul-out at Norsand Boatyard he had the Norsand boatbuilders grind-out and re-cove the starboard joint and intends to do the same with the port cove prior to relaunching.

At the time of the inspection the catamaran had been out of the water for five days. Random moisture meter readings were taken on the surfaces of the hulls, keels, skegs and rudders in areas where the Coppercoat had been sanded back to the underlying coatings. The readings in these areas on the hulls and skegs were between 14% to 16% H<sub>2</sub>O. Higher readings of between 20% to 25% H<sub>2</sub>O were recorded on the rudders and forward ends of the keels, however, the higher readings in these areas are not necessarily of concern considering the catamaran has been out of the water for a relatively short time.

### **Running and steering gear**

There was appreciable movement of the stainless steel propeller shafts in an up and down direction in the P-bracket Cutless bearings. The owner advised that he intends to have Whangarei Engineering fit new Cutless bearings prior to relaunching.

The accessible sections of the stainless steel propeller shafts were visually inspected and were found to be in good condition with no pitting or corrosion noted.

The MaxProp feathering propellers appeared to be in good serviceable condition and were secure on the shafts.

The bronze P-brackets were secure and in good condition.

The rudders was visually inspected and lightly hammer sounded. No splits or seepage at the blade edges were noted. No movement was detectable between the rudders and stocks, and no undue movement in the gudgeons, or bearings was noted.

### **Cathodic protection**

Anodes are fitted to both of the MaxProp propellers. The anodes had been replaced at the time of inspection.

### **Through-hull fittings**

Through-hull fittings appeared to be secure and in good serviceable condition. It was recommended to the owner that he check the through-hull fitting strainers to ensure that they are secure to the hulls prior to relaunching.

### **RECOMMENDATIONS**

Overall the parts of the vessel inspected appeared to be in good sound condition and had been (and were continuing to be) well maintained.

It was recommended to the owner that the following items are attend to prior to relaunching:

Replace the port and starboard P-bracket Cutless bearings

Grind out and re-cove the port side skeg to hull joint

*During the inspection of Samuri I checked the general condition of the catamaran's hulls below the waterline, where accessible, including appendages and through-hulls and it is only this area I have specifically commented on. I also conducted a brief inspection of the bilge areas of each hull in order to make an overall assessment of the hulls below the waterline. It was not possible to see some parts of the vessel during the inspection and no responsibility can be accepted for hidden or latent defects. Woodwork or other parts of the structure which are covered, unexposed or inaccessible were not inspected and I am therefore unable to report that any such part of the structure is free from defect. This report represents the condition of the vessel on the date shown. No opinion is offered as to the future condition or serviceability of the vessel, its machinery and other equipment installed on this vessel. This report is the unbiased opinion of the undersigned, but it is not to be considered an inventory or warranty of the vessel either specified or implied.*

Yours faithfully,



Murray F Reid  
Marine Surveyor