

A HURLEY "FELICITY" – NAMED "WINDFALL".

I purchased the above 20ft. sailing cruiser from a 78 year old gentleman named Reg Greenslade in September 1986 for the price of £450. It was moored on the Hamble river near Southampton and Reg and his wife had cruised the boat for a good many years.

Although I had been involved with dingy sailing this type of boat was new to me and it was evident that it required a considerable amount of repair and maintenance. The hull was sound as was the wooden mast but not much else.

Of all the jobs I had to do on "Windfall" there were three which remain in my memory as being difficult and/or tricky. One was the replacement of the main beam supporting the front of the cabin which had a geometry which could only be described as complex..

The second was scraping off the hull prior to re-painting and antifouling and the third was replacing the two steel side keels which I will describe in a little detail.

When I had been in possession of the boat for a while I became unhappy with the side keels as they had corroded to a point where they were wafer thin in places. The centre keel was not a problem because being made of cast iron it was not as susceptible to corrosion as the steel ones. My engineering instinct would not let this rest so I set about working out how to carry out the replacement. In one respect I was fortunate as I at that time I worked in a technical college where I had access to students on fabrication courses who from time to time took on jobs such as mine under the heading of "project work".

The first thing I had to do was to work out or guess what thickness the replacements should be, bearing in mind I had no reference to work to. Finally I arrived at a figure of $\frac{1}{4}$ of an inch but after the operation was over I wished I had opted for $\frac{5}{16}$ ths because although I calculated the weight of the new keels the final fabrication produced a weight lower than I had anticipated.

I unbolted the old ones which was not difficult but prising them away from the hull was another matter. In short it required brute force as the "stiction" was incredible and they were heavy. I hastily add that the hull was not damaged in any way during the process. Now to the fabrication. I provided drawings showing the dimensions of the main body of the keels together with those of the flanges which were of much thicker steel but the main problem related to the curved profile of each keel where it fitted against the hull. Believe it or believe it not these curves were not exactly identical so the only thing that could be done was to use each old keel as a template. The keels were subsequently produced with the thicker flange welded to the main body in each case with the hope that the shapes in question would fit "Windfall's" hull.

The next challenge was to determine what type of surface treatment to be applied because although I did not know very much about how these keels should be treated I knew that steel and salt water did not like each other. Try as I did I had extreme difficulty finding out what process I should apply even after consulting the so-called experts. Finally following my own hunch I decided to opt for hot-dip galvanising. I found a firm in Southampton who were more than willing to help and so I ended up with two galvanised side keels for my beloved boat.

There is more yet. How to fix the keels to the hull! Each keel has a row of holes through which pass bolts which must also have some form of surface protection. They must be the correct length; they must have nuts and washers equally protected and take account of rectangular straps which fix under the washers and straddle each pair of bolts aligned opposite each other along the flanges. The bolts, nuts and washers I obtained from a local company here in my home town of Andover and the straps which were galvanised with the keels, were made by my faithful students.

Understandably you would be forgiven for thinking that now it was all over bar the shouting but not so. How do we seal the keels to the hull and how do we ensure that no salt water gets in around the bolts? In this I was relatively fortunate as I went to Moody's boatyard at the top of the Hamble river and asked in their workshops what kind of sealing compound they used. They told me they used a two-part compound called "Rallybondite" and directed me to a firm in Waterlooville near Portsmouth from which I could purchase it. This firm was likewise helpful and sent me two tubs one with a black compound and one with a white compound. After trying the keels to see if they fitted (they did !!!) I mixed up the appropriate amount of half and half compound; applied it to all relevant parts of the keels and with the help of my "lady wife", my youngest daughter and my youngest son, bolted the aforesaid to the hull of the boat. The compound, by the way, cures and finally behaves and feels like rubber. It worked and there were no leaks. I have since used this compound for other purposes both in and out of boats.

Finally the keels were treated with the conventional materials such as are sold by the commercial companies.

The boat is now in the care of my eldest son on the Isle of Wight and we subsequently found that the application of magnesium “slave” electrodes was advantageous in preventing erosion of the keels. Selection of these requires some care and they seem best positioned inside the keels. Each year the keels are cleaned off and touched up where necessary with “Galvafroid” after which they are given conventional surface treatment.

The side keels were in the first instance provided with wooden protective strips along the bottom - two strips to the bottom of each keel. These strips do not stand the test of time but that is another story!

Terry O`Sullivan.

(One Time Boat Owner but now much richer!)

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