

Replacing my Hurley 22 Ruddertube

There are already a few guides to replacing H22 ruddertubes on the Hurley Yahoo Group website. This is not much of a guide at all, but I wanted to contribute something, if only a "how not to" guide.

When I bought my Hurley 22, my very first ever boat, I had been previously looking for some time for a larger vessel on which I might be able to live. In the end, I chickened out and settled for a smaller craft. But after all my research into Westerly Centaurs, Sabre 27s, Macwester 27s, Jaguar 27s etc etc, I was a little fed up with research and it was already spring. So I rather rushed into my purchase of the H22; I did not do much research, did not consult the readily available information regarding well-known issues with Hurleys and most certainly did not have a survey done. When I first checked out the boat, I looked under the cockpit floor and was greeted with this horrendous amorphous blob:



'It came from ...outer space!'

The cause of this unsightly mass of expanding foam had me perplexed, and so I enquired with the broker if they might pass on my question to the owners to offer any explanation as to why it was there. Some time later- "no idea" was the response. So I thought to myself, "oh well, here's my money!". And then I had my first boat.

A few weeks later, after doing a little (perhaps ill-advised) sailing, I was looking into joining the Hurley Owners Association when I came across the technical advice page and saw rather a lot written about the state of H22 ruddertubes. It occurred to me I should probably have a look at mine, but the blob was obscuring my view, and then it dawned on me that there might be a connection. I started thinking that the foam was an emergency measure to stop a rapidly leaking ruddertube and then promptly put a hold on any sailing adventures until I sorted it, all the while cursing myself for not doing this basic bit of research before buying the boat.

In my naive enthusiasm for not spending money, I thought at first I could do this job between the tides. This is stupid. I soon gave in to myself and had the boat craned out into the yard, only 4 weeks or so after I had it craned into the sea. I set about removing the foam, but to gain access I had to remove the cockpit drains. (These were rather old and assembled from cheap brass fittings, I replaced these with bronze and DZR fittings, and while I was at it, did some of the other skin fittings too). I managed to remove the foam rather quickly, but where it had cured, presumably in the presence of saltwater, it had gone especially tough and brittle and was a nightmare to remove in places. Eventually I cleared enough to get a look at the ruddertube:



Behold.



That needs some attention.

It seemed my boat still had the original galvanised scaffolding pole, and considering the state of it I was quite surprised the thing was still floating.

To remove it, I used a combination of angle grinder and hacksaw to cut the tube. Anyone who has done this job knows how cramped and unpleasant it is lying under the cockpit floor, let alone while using an angle grinder. I then used the grinder on the exterior skin fitting with the intention of pushing the remaining section up into the boat from the outside. This took quit a bit of work, and a lot of finesse and care with the grinder. Once I had removed the outside portion and had to apply a lot of torque with a Stilson wrench to twist it free, so much that I actually crushed the ruddertube, but alas, it came free!



A little piece of history. Or just a poor design feature.



My foe, vanquished.



A view from the outside looking up through the remaining ruddertube.

At this point I had to decide whether to replace it with a complete stainless steel tube or do the hose-pipe onto skin fitting job that later H22s had. I would have preferred to go full stainless route, but the foam had expanded all the way up the cavity in the GRP that the ruddertube followed:



This foe was beyond me.

The foam went to the very top. I cut a small inspection hole in the top of the GRP just below the tiller attachment, and was met with a little patch of indignant yellow foam staring out at me.

This whole job was a series of highs and lows, mostly lows and after the eureka moment of finally removing the skin fitting, I eventually realised I could not remove the rest of the tube. I tried mechanical- sawing, chiselling, stabbing, drilling, twisting. I tried chemical- acid, acetone, white spirits. But it was to no avail, the ruddy tube simply would not budge. This essentially ruled out the stainless steel option, at least not without doing some serious GRP surgery, which I had neither the time, inclination, ability or willing budget to do. So I decided to install a 1 1/4" DZR skin fitting with hose-tail and bridge the gap from this to the remaining original ruddertube with some PVC hose. There was a discrepancy however, between the diameter of the hose-tail on the skin fitting and the diameter of the ruddertube. I had to connect these two using a short run of PVC hose. I chose 38mm reinforced PVC hose, which fit perfectly on the skin-fitting, but it was a bit of an effort to get it onto the 42.5mm diameter ruddertube. However with some lanolin grease, some elbow grease and some hot water I managed to get it on, and then clamped it down:



The hose where it connects to the remaining ruddertube.



Prioritising function over form.

I must confess I was a little concerned about the structural integrity of this setup, and I kept thinking about the fabulous stainless steel ruddertube setup that some other H22 owners have installed. But I reminded myself that as far as I know, South Coast Marine actually made the later H22 models with a hose and skin fitting rudder tube as standard, so if it is good enough for factory-fitted, then it is good enough for me.

The only thing left to do was to fit some kind of plain bearing inside the skin fitting to give a snug fit to the rudderstock and reduce play. I tried to be clever and cast a bushing on the rudderstock out of epoxy resin and graphite powder, but it turned out to be too flimsy, so ended up just using a collar chopped of a length of PVC pipe.



The flimsy bushing.

So this is how I did my H22 ruddertube, maybe not the best job, but she is still afloat. Although I do keep meaning to buy some Stay Afloat™