

The Cockleshell Pit Stop



2008

Each winter after Cockleshell has been snugged up under her winter cover I reflect on the season's sailing just completed. This is now the second occasion when I look back with irritation of how little racing has been done due to a rotten summer. In both 2007 and 2008 we have often seen either too much wind or too little. This has occasionally caused cancellations by the race committee, or caused me to decide not to venture out.

Its difficult to know how tough an old boat is until you break her, but with a brutal rating from the club I work so hard for it seems pointless to thrash the boat in 20 knots of breeze with little prospect of a respectable handicap result. More salient is the fact that the boat is horribly wet in these conditions, and no matter how willing the crew might be I have found there is a limit to their dedication.

Sailing in the Solent chop is, I expect, quite similar to the Little Russel on a good day, so I take my hat off to AJ and the people who crewed for him. My father was probably even more reckless and that the boat was never lost on one of his mad endeavours probably says more about the quality of the naval architecture than the seamanship.

In the Solent there are similar boats, Dragons, X-One Designs, Sunbeams etc, that are regularly swamped and lost during racing, so the fact that Cockleshell has survived over eighty years including a channel crossing is a tribute to the man who crafted her. Incidentally, having looked closely at a half-



model of a Sunbeam at the Itchenor Sailing Club a couple of years ago it seems very likely that this boat was the main inspiration for her lines. The first Sunbeam was launched in 1923, three years before Cockle.

2008 produced one unwelcome excitement. Cockle has had a minor leak from the horn timber (from the rudder post to the transom) since I can remember, but at the beginning of June this turn into a gallon per hour deluge. Thankfully I had gone out to the boat to check her and found the water level three inches over the floorboards. Better still was that I had my girlfriend Vicki with me and her eleven year son Callum in his 2.5 metre RIB.

Much to his astonishment and my satisfaction his 2.5hp Suzuki outboard drove Cockle up river at three knots, Callum aboard his RIB tethered along-

side as throttle man. Next day Cockle was lifted out at the Elephant Boatyard for what would be a month long lay up while the remedial work progressed.

Having eliminated the possibilities of rot or failed caulking, the cause of the leak was tracked down to the brass rudder tube through which the bronze rudder stock passes. Corrosion deposits had married the two together resulting in the rudder tube turning in the boat, something that had probably been happening partially for years.

Having had the rudder and stock out of the boat in 1988 when the old rotten rudder blade was replaced, it was rather maddening to have to go through the whole disassembly process again after just twenty years, and only tempered by the joy of once again being reminded of AJ's scrupulous design work.

To wit, the rudder, once released from its rivet fastenings and with the two part shell fitting removed at the top of the blade, can be lifted clear of the bottom gudgeon and extracted. With the helm locked hard over to port or starboard the rudder blade can be swung through an arc from between the yoke of the bronze stock. In this way the rudder can be installed without requiring the boat to be lifted, a facility that would not have been available to an amateur builder in his garden.

One can imagine and share the pleasure AJ must have sensed as he put these parts together for the

first time in the workshop at Beauregard. The new mahogany rudder blade that your author built had been lovingly fashioned using the old one as a pattern, and after a coat of SP epoxy was offered up and rivetted back into the original bronze stock. So now with rudder and stock out of the boat for the second time the job of driving the rudder tube off the stock was next, but no amount of heat and thumping would budge it. So the job was passed to



Hamble Propellers but despite their expertise it defeated even them. So it was decided to carefully slice the tube near the top and bottom without cutting the stock and then mill down the central section on both sides. To their credit the friendly guys at Hamble Propellers remained good humoured throughout this time consuming job, refusing additional payment beyond the modest quote they had given for the job at the outset.



So with the rudder tube returned to me in four pieces the next quandary was how to make good the repair, and try and work out what had caused the problem in the first place. Most baffling was that having had the stock out in 1988 and re-assembled it with copious amounts of Keenol grease why had it seized, considering the same parts had lived harmoniously together for the first sixty-two years of the boat's life.

Had there been no grease at all when first assembled in 1926, or is corrosion more rife in the Solent than in the Channel Islands, or East Anglia? Needless to say there was some debate on what to do this time round, and having assembled the brains trust of professionals and classic boat owners at the Elephant Boatyard, the decision was made to use clear waterproof silicon grease.

One amusing detail that I spotted first time round in '88 is that the 1" bronze rod of the stock is clearly a piece of second-hand material, with some previous holes filled with braze. I guess AJ scrounged this from who knows where, and is probably the oldest part of the boat.

Meanwhile, with the rudder out of the boat it was time to look at the rudder post which has always been fragile and the news was not good. The inside of the curved rebate where the leading edge of the rudder sits is impossible to reach for repainting and since the rudder refit in 1988, the first since 1926, gribble worm had been hard at work. The erosion was inches deep.

What to do, as complete replacement of the post would mean releasing some plank ends and the risk of finding unknown issues within the deadwood, not to mention a further lengthy delay before relaunch. A more expedient solution was chosen, and one that will probably do for another ten years at which point a complete keel off and deadwood rebuild is almost certain to be needed.

Having dug out some of the rotten wood (probably oak), what was left of the stern post was allowed to dry naturally for a week in the June sunshine. Some residual bilge water was finding its way through making this a slow process, but at last it was time to apply heat and exterminate the gribble worm. The classic boat bodger's stand by, Bonda G4 moisture cured resin, was next to be applied, followed rapidly by an epoxy and colloidal silica paste. A large quantity of this was ladelled in and fashioned to shape as it cured.

Also it seemed sloppy not to fully strip off twenty years of antifouling from the new rudder and ensure that all was well with the mahogany blade. The epoxy coating was found to be intact apart from some minor damage sustained during the strip out, and after a thorough rub down a fresh coat of epoxy was applied. The result was almost as good as when new, and having to repaint this shiny item with primer and antifouling was something of a wrench.

Another item that it was interesting to revisit was the bottom pintail that was badly worn after 60 years of use. A 18mm OD turned brass tube had been turned up to shim the old stump in 1998, and just 0.6mm of material had been lost since in twenty years.

The last bit of the jigsaw to solve was the rudder tube, now in bits, and as would be expected my initial preference was to return the whole job to authentic original specification. But having sourced



1.25" diameter 1/8th wall brass tube not only was the price unenticing (a metre length would be £50 plus carriage) the ends would also need parting off and threading. Time was up so the solution chosen

was to re-use the original undamaged rudder tube ends and bridge the gap with a flexible reinforced plastic pipe, thus using most of the original bits.



As the bronze stock was slid back up the now two-part tube it occurred to me that yet another job should have been tackled. The very top of the bronze stock had sheared off about five years ago, much to my horror. The same old brass tiller nut had been tightened up on so many occasions, and in my time Loctite has been applied to improve things. At the end of the season I failed to use some heat before applying the socket wrench and off came the 5/8" threaded end complete with nut.

Having chastised myself over the winter months I finally concocted a plan of action. This involved building a timber jig to allow me to accurately drill a hole down the centreline of the stump, which was then tapped with an M6 thread.



Since then the tiller has been held on with an M6 stainless steel bolt, assisted by Araldite to pack the tiller head very tight. This looked perilously under-specified but has proved perfectly reliable. Ideally a new stainless steel or bronze section should be grafted on the top of the stock, but that will have to wait until the next big job sees the rudder out again.



With the two part rudder tube now sealed in place and all the parts offered up it was time for final reassembly.

Some 8mm copper rod had been found in the Elephant shed to make up new rudder rivets, and with generous amounts of Sikkaflex to seal the rudder they were peened over. After a days curing polyester filler completed the fairing, followed by coats of metallic primer and white antifoul.

Finally, after four weeks and uncounted hours of work, Cockleshell was craned back in to the water on June 30th 2008. Some sceptical boatyard artisans stood by expecting a sinking, but much to my satisfaction and relief after five minutes not one drop of water was in the bilge. The reputation of this amateur shipwright was thankfully intact, and with unstinting practical support from Vicki and canine friend Smudge the boat returned to race fitness.

