Fitting a log transducer through the outboard well on an E23

I don't know about you, but I have quite an aversion to drilling holes through the hull of my boat. I recently bought a tatty Elizabethan 23 which I am refitting slowly. The previous owner had fitted a NASA Clipper duet depth and speed log instrument. He had fitted the sounder transducer internally, but the log had never been used and the transducer was neatly coiled up in a locker.

I was faced with the prospect of drilling a 42mm hole in the nice clean hull. I didn't have time to do this at Burnham where I bought her from, so was contemplating having her lifted out at Tollesbury and doing the job. Unfortunately there was no room to bring her ashore, which meant that I had to think of something else.

Eloisa has a Mercury 8hp outboard in a well, which has reasonable access around the outboard leg. I conceived a plan to create a "Pod" which could be passed down into the well, holding the log transducer.

Being at heart a complete bodger, I looked around for a suitable container that had to be 1: Streamlined, 2: Cheap. I didn't contemplate making a pod from glass fibre even though that would be interesting. My eyes chanced on an old Brita water filter that we didn't use and hey presto the basis of the pod was found.

As you can see from the photograph, I merely drilled a 43mm hole through the base, attempting to offset the hole slightly to one end.

I next cut some reinforcement from some 9mm exterior ply, one piece to go inside and 2 pieces to go on the outside, which also gave me extra space for the transducer.

The internal piece has a second hole drilled for the mounting pole.

When the plywood was assembled with the transducer mount it looked like this.

After some gentle sanding and adjustment, I assembled it using Sikaflex as a sealant between the plastic and the wood.

The mounting leg came from B&Q and was sold as a breakfast bar leg, cost £1.75. I removed the plastic end and drilled a hole in the side to feed the cable to the outside world. The Stepped top of the filter holder was ideal for placing a lid of 9mm ply, drilled with a hole for the leg.

After installing the transducer I filled the bottom of the container with epoxy, this was to totally seal the bottom, and to fix the leg end. And yes I did remember to fit the lid onto the leg before applying the epoxy.

The lid was actually glued into place and sealed with epoxy. A small triangular reinforcement was epoxied to the leg and top.

The top of the leg is supported by a crosspiece and a plywood support.

There are 3 support straps which I must admit is one too many, but it isn't going to fail in a hurry.

The cross beam was made of 3 pieces of timber glued and screwed together and shaped to fit the bearers that I have fitted into the lazarette.

The whole assembly is held tight by 2 M8 wing nuts which are bolted into the bearers.

The whole unit was given a coat or two of paint, and adjustments made to the vertical position of pole, to ensure that the pod sits correctly in the water.

After a trip the whole thing can be withdrawn and stored in the lazarette. This removes the classic “mud up the pipe” problem of these transducers in a mud berth and stops fouling etc. If anything has the temerity to grow or foul the transducer a quick wash down should clear it.

The unit has been well tested and works really well, In fact the wing nuts have so far been unnecessary, but I suspect that as the holes open up they will come into play.

Since the pictures were taken, the outboard has been shifted about 1” to port which gives more room to insert and remove the pod. The outboard is now actually on the centre line!

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