



THE EMPIRE'S LAUNCH.

The Consuta Trust

The advancement of education in the history of steam launches, by preservation, maintenance and exhibition of the steam launch **Consuta**

Consuta Trust Newsletter - Autumn 2018

Project Work

The engine has been cleaned, refurbished and is now re-installed in Consuta.

Several drawings for the new metal work have been prepared, eight to date and the work has been costed and has now been ordered. We are trying to use as much of the old mahogany from the boiler and engine casing; but there is a limit as to what is re-usable because of screw holes and also the mahogany splits where-ever it has been glued.

Various ideas have been considered for the new steering pedestals, these will be metal castings. All our historic photos show these as polished brass/bronze. Those who have come along to the shed will have seen a rather nice steering pedestal in place at the helmsman's position, it's a pity but it's not like the original so cannot be used. The height of the steering wheel will now be higher by some 2 inches than before – much more comfortable for the helmsman.

Lagging of the boiler is progressing and when completed the boiler will be finished off with painted metal cladding to look smart. The lagging on the backhead will also significantly reduce heat loss here, and more important, making it cooler for the fireman – always a hot task during the summer months.

The project refurbishment work needs a surprising amount of new metal fabrication and pipework work

Some pipe sizes are large; the main copper steam pipe for example is 1.5" bore with a 1/8" wall, the copper exhaust pipe is 2.5" bore but with a thinner wall. The exhaust pipe will be routed through the top of the starboard side coal bunker instead of along by the side of the boiler – work is progressing well on this. In case you are wondering will this effect use of this bunker? Probably not as it seems that most engineers don't like



Photo shows route of new exhaust pipe

using the starboard side bunker, so the small loss of coal storage volume here will not be an issue. The new pipe route will however mean that the boiler can be lifted in and out without a need for removing a long section of exhaust pipe as previously. The route of the engine steam pipe will also be much shorter than before going between the boiler backhead to the engine, although this pipe will still have to be removed to lift out the boiler.



LOTTERY FUNDED

There are many more up to date photos of the work progress on our Facebook pages.

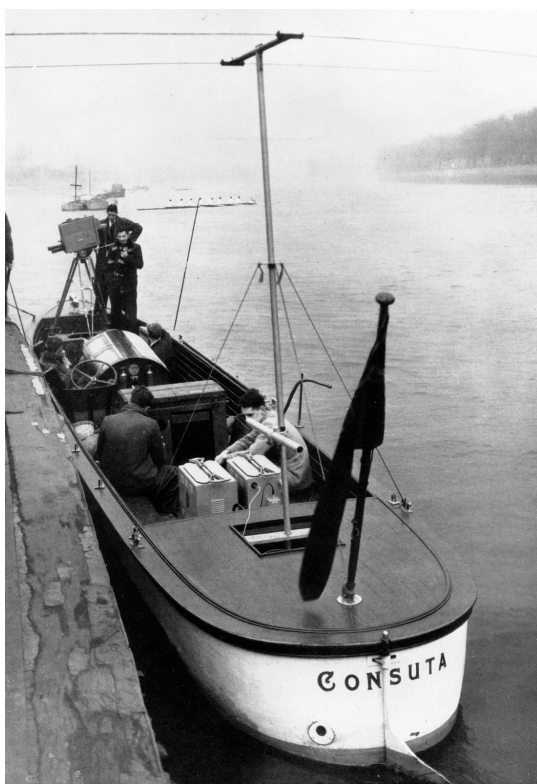
The prepwork for the refurbishment of Consuta has involved a very close scrutiny of many old photos and numerous measurements taken from these.

Some of the details have left us wondering how it originally all fitted; for example when trying to size up the new engine casing it was found difficult to match some of the new woodwork work with that in those early photos. Was the engine too high in the boat? Should it have been further back? Paul even suggested that maybe the engine was not the original (this for me is blasphemy, because we had been given a verbal recollection by James Taylor who said that it was the original because his father had removed Consuta's steam engine in 1923). Paul decided to take some measurements from these early photos between deck level to waterline, and when compared with the present measurements his conclusion was that Consuta is wider now than when built. Now this could explain why the engine seemed higher than original. Lloyds Register of Yachts gives Consuta's beam as 7 ft but the beam is now 7 ft 6 inch; mind you Lloyds isn't always correct but if Consuta originally had a narrower beam than present, the engine would probably appear lower by almost two inches because when a boat's side spread the gunwales drop lower in relation to the keel.

I remember prior to the restoration work that Consuta's empty hull sides could be push in and out by large distance because there were no ribs – so did we not go far enough 20 years ago? an interesting thought. Hindsight is a wonderful thing, also we do have so many more historic photos now.

More details from Consuta's past history

The Henley River and Rowing Museum had recently arranged a talk about how TV coverage of the Boat Race had developed over the years. Our own Consuta was used by the BBC in 1949 for the first water borne TV Outside Broadcast. The signal was transmitted to shore via a rotating aerial, and the TV equipment used was an early Marconi monochrome TV camera, with thermionic valves, all heavy and very bulky. The aerials from left to right are for sound commentary, vision transmission, reception of cues and instructions from the control centre at Riverside Telephone Exchange. Immediately behind the cameraman are the commentators. In the stern is the petrol electric generating set for supplying the equipment.



*Photo above courtesy BBC
Image © BBC, 1950. For more about BBC coverage of the
Oxford and Cambridge Boat Race visit: <https://www.bbc.co.uk/historyofthebbc/research/programming/boatrace>*

Televising the Boat Race, 1949

Readers who "looked in" on this year's Boat Race will agree that the result of this unusual out de broadcast more than justified the research and effort by the engineers who made it possible. Here is how it was done

FOR the first time in television history the B.B.C. televised the Oxford and Cambridge Boat Race from start to finish. The outstanding innovation was the use of a waterborne television unit in the launch "Consuta" to follow the crews over the entire length of the course. In addition seven television cameras were spaced at strategic points along the river from Putney to Mortlake.

No doubt the idea of television cameras following a race from start to finish will be commonplace in a year or two, but to-day it is a complete novelty. This is not only because the fundamental technical difficulties are great, but also because in the past sufficiently lightweight and portable equipment of the complex type required has not existed.

The new mobile television equipments recently brought into service to supplement the massive pre-war units approach this ideal sufficiently closely for the B.B.C. engineers to make an all-out attempt to televise the whole of this year's Boat Race by means of a specially lightweight camera channel, mounted in the 60-foot river launch "Consuta."

In addition to the complicated camera apparatus, a lightweight television transmitter of low power, and hence of comparatively restricted range, and a transportable petrol-engine generator set, completed the equipment of "Consuta." The camera, recently developed by Marconi's Wireless Telegraph Co. Ltd., for this type of work, was mounted on a tripod carried on rubber-cushioned supports in the bows to insulate its delicate mechanism from the vibration of the launch engine. Immediately aft were placed four suit-case units containing the camera supply and pulse generating equipment, and power packs. The generator set and the radio transmitter, which was manufactured by Pye Limited, of Cambridge, were stowed in the stern, thus giving "Consuta" a good trim.

Aerial Arrangements

The transmitting aerial, from which the pictures were radiated to relaying receivers on the shore, was rigged astern and emitted horizontally-polarised waves. Under the special conditions encountered on the river, horizontally-polarised waves were found to give steadier propagation conditions, and to

be less subject to the effect of random reflections than the vertically-polarised waves used in the first tests.

With the very high radio frequencies that must be used for television transmission, reflections from nearby buildings and the bridges represented the major problem of this broadcast, since they gave rise to multiple images and violent pulsations of the picture received from the launch at the shore station. For this reason, and because the bridges constitute a natural barrier to the radio waves, the useful range of the launch transmitter was extremely restricted. In consequence the B.B.C. engineers divided the Boat Race course into three sections and established three shore receiving stations to cover as much as possible of it.

The first, on the roof of Harrods' Depository, received the pictures from the launch between the start at Putney and Hammersmith Bridge. The second, situated at the Metropolitan Water Board pumping station on the opposite side of the river by Chiswick Eyot, picked up after Hammersmith Bridge and functioned as far as Barnes Bridge. The third, using an aerial mounted on a fire escape ladder at Chiswick Bridge, covered the last stages of the course and the finish of the race.

Seven Shore Cameras

Interspersed with pictures from the camera in the launch were a variety of shots from shore cameras situated at four points along the course—three at the start, two at Harrods' Depository, one at the Metropolitan Water Board, and two at the finish.

The pictures had to be routed back to Alexandra Palace via Post Office telephone exchanges and could not all be made available at a central control point simultaneously, with the result that programme production in the usual sense was not feasible. The changeovers from the launch pictures to those provided by the shore cameras, and vice versa, had therefore to be made to a prearranged switching schedule.

This adventurous experiment with a waterborne camera to give a comprehensive view of the race was only possible through the co-operation which the B.B.C. had from the G.P.O., Electric and Musical Industries Ltd., Pye Ltd., who supplied the transmitter, and Marconi's Wireless Telegraph Co. Ltd., who made the camera.

There is some fascinating detail about the suitability of Consuta and other umpire launches used for covering the boat race, detailed in some internal BBC Correspondence of the 1950's. Consuta was owned by Phelps at this time and had a six cylinder Gray Marine engine:-

“Launches for Boat Race Broadcast

I rang Ted Phelps, as you told me, about the performance of the Magician last Saturday. He agrees that, though the horse power of the Magician's engine is the same as that of Consuta, the former launch is not as fast as the latter. In view of this he agreed with me that, if we require two launches another year, we should have the Consuta and the Enchantress.”

I found this interesting and wondered why was Consuta faster than Magician; perhaps the engine HP's were not actually the same, another factor of course might be that Consuta would have been lighter than Magician due to the plywood construction without ribs. Clearly Consuta was well liked by the BBC for this work and continued in the role until the 1960's. Sadly Magician built in 1923 has deteriorated since her sale in 2000, also Enchantress built in 1913 is now in need of some major restoration work

Consuta Project Activity work

Part of our HLF grant was to provide a variety of public activities to help widen public understanding of our heritage.

A part of this programme was to arrange visits and talk related to early Thames boating, specifically the early uses of steam propulsion.

We decided to promote a visit to Crofton steam pumping station during their September Gala Festival. Twenty two visitors were sponsored as part of the Consuta Project activities budget. Crofton is an ideal place to see some of the earliest steam engines at work, two beam pumping engines in a lovely setting and was greatly enjoyed by our group of visitors.



*The Lancashire coal fired boiler in steam at Crofton.
The coal used is ordinary household variety not steam coal*

Consuta Project Activities Job

The Consuta trust currently need to appoint a Project Assistant whose responsibility will be arranging and publicising more of these sort of visits during the next 14 months.

This post will be a paid part time job and the person appointed will be required to arrange a variety of talks and several visits to various museums that have a River Thames or steam launch context. We have already prepared a list of some options but there is plenty opportunity to develop this. The Project Assistant will be required to make all the arrangements and co-ordinate the various activities. If you are interested in this sort of work or perhaps know someone who might help please contact me ASAP if you would like to know more,

Best wishes to all.

Brian Smith, on behalf of the Trust

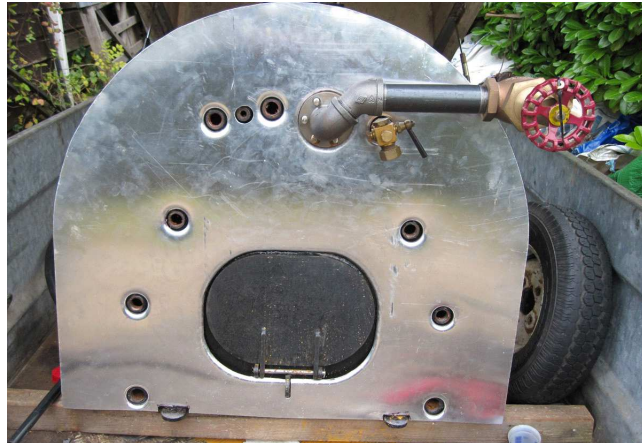
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30th October 2018



On the left:- The two pieces of mahogany are on the left: an old seat from Consuta and on the right the shorter piece just removed from Consuta. We had wondered whether it would have been possible to use some of the old wood (probably original) for historic reasons, however as you can see the grain is different.

Below:-The backhead lagging plate. This is in aluminium and the holes for the fittings and fire door have been contoured in to hold the lagging material in place. The outside edges still have to be turned in along the backhead. The pipe plus main stop valve show the route of the steam pipe to the engine.



Here are a few more photos of the Crofton visit.

Above shows an interesting collection of large spanners – we may have the need of a large one dependant on how the Consuta's engine steam pipe is connect to the boiler.

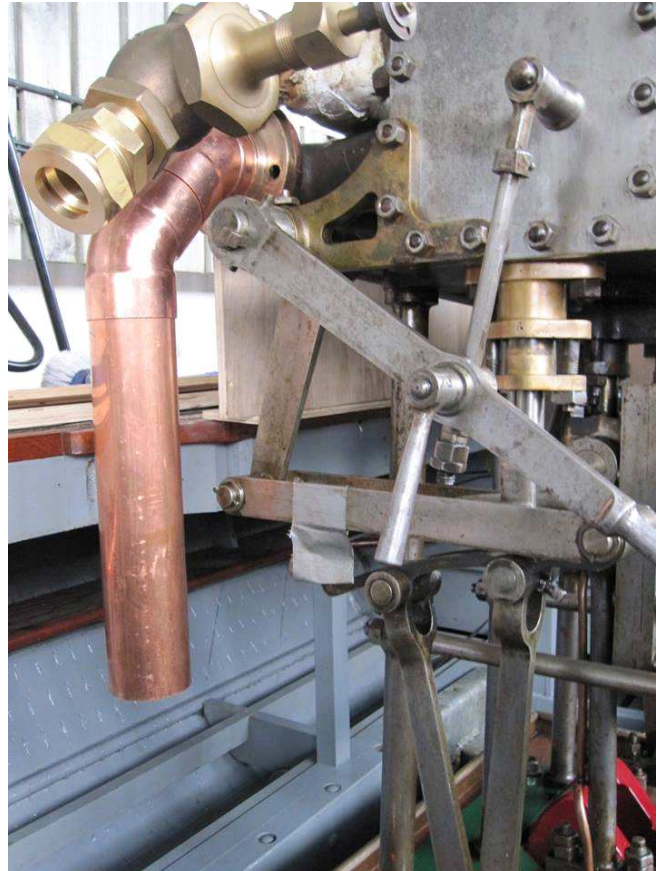
Top right shows the lagging brickwork on the Lancashire boiler, the safety and stop valves. Crofton pumping station – bottom.



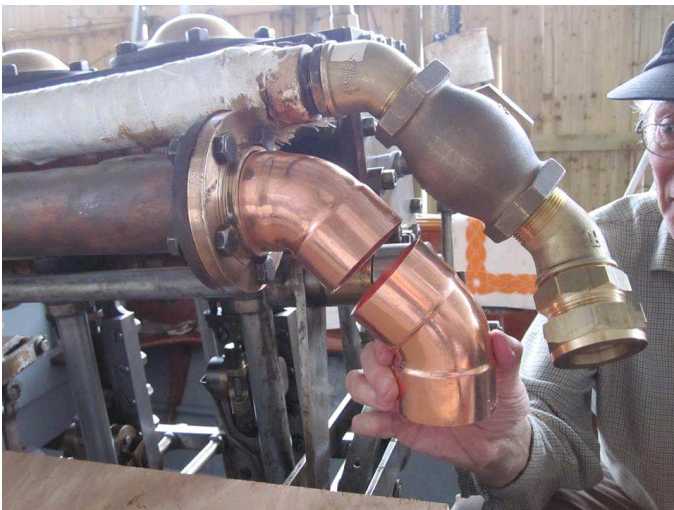


*Trying out the old engine casing for size – seems a bit too long; can it be shortened?
Yes Colin is on the job.*

A post script page of photos



Checking to see the best fit for the engine steam and exhaust pipes.

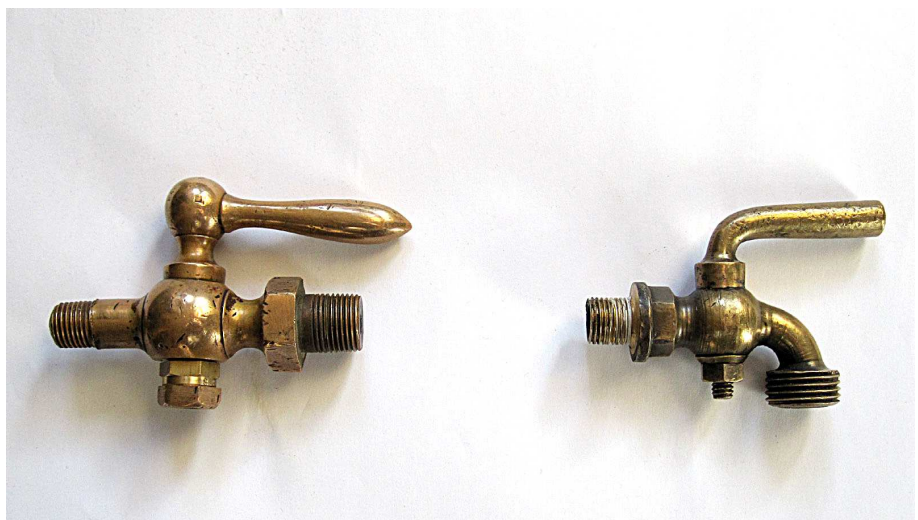


I don't know whether you've noticed but the engine drain cocks are not a matching set.

The really odd one out is a valve chest drain – shown on the left. It is mounted back to front and is slightly bent.

What we really need is something like the one on the right.

Do you have anything like this in your junk box? Threads are 1/4" BSP into the tap and either 1/2" or 3/8" BSP on the tap nose. In my 1938 catalogue these bent nose bib cocks in 1/4" BSP are priced at 3/6d, If you can help please do let us know.



BWS