



THE EMPIRE'S LAUNCH

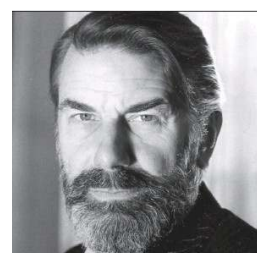
The Consuta Trust

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

Consuta Trust Newsletter - Summer 2018

Our patron Lord Strathcona died 18th June aged 94. Euan Howard later Lord Strathcona and Mount Royal was a keen supporter of historic ship conservation and was part of the team that managed to return the SS Great Britain from the Falklands to Bristol in the 1970's

Euan was a very likeable person and a good friend, his death is a sad loss to all who knew him, to the Steam Boat Association of which he had been president and the Consuta Trust. More details on the SBA website.



Refurbishment work

During July we moved two future museum exhibits owned by the Tamesis Trust into our shed, the iconic Thornycroft steam launch Cygnet which is almost 148 years old, and a Saunders stitched 30 footer (in two sections). Someone remarked that we now have plenty samples of Consuta plywood, or perhaps we should consider joining the sections together and make the 30 footer usable again?.

So it is fortuitous that we extended the shed for Consuta, however prior to this move the shed layout was modify to give better accessibility. We also took the opportunity to install shelving and box various items up to make for easier future location and usage.

The lifting gantry has proved extremely useful and with our weighing gauge we find that the engine only weighs 657 lbs but the engine metal mounting frame which sits on the boiler bearers weighs over 180 lbs. The engine and the mounting frame have been taken out a couple of times. This was necessary to clean and repaint the bilge's under the engine, first time in 18 years, also to clean and repaint the engine.

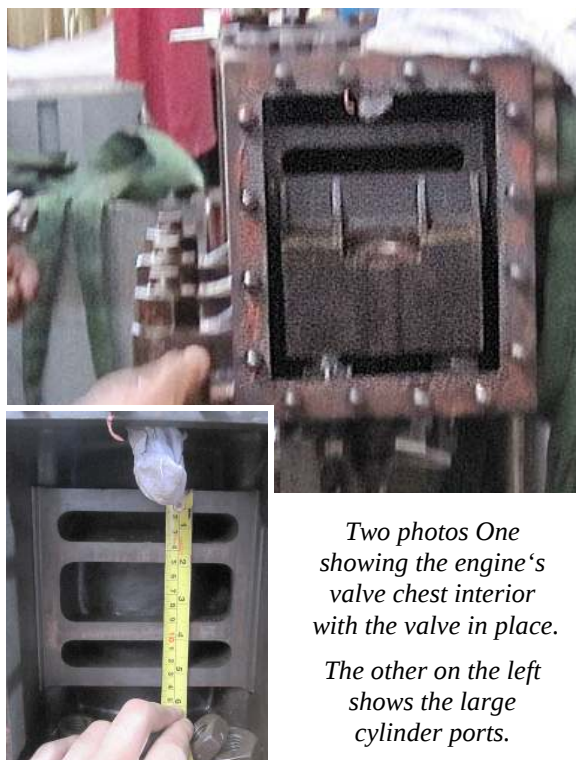
The mock-up for the new wood upper works had been set up on the hull and checked out by trustees. All these changes required a great many measurements from those old photos, plus some head scratching wondering how did Sam Saunders fit it all in.

Due to a mix-up by the SBA Services boiler inspection service, we had to repeat the hydraulic test on the new boiler at Kintbury. A hydraulic test for a new boiler requires the boiler to be completely filled with cold water then pressurised to (in our case) twice maximum working pressure. For us this was a test pressure of 360 psi, applied and held for 45 minutes while the SBAS inspector checks for any signs of distortion, or any leakage from the welds or stays. There were no problems at all, so this means that the boiler will now only need all the new steam fittings mounted and then be checked out in steam at normal working pressure of 180 psi, this will be some time next year.

We had also decided to give the engine a major a check-up, a cleaning and repaint. This involved scraping off all the old caked-on oil and grime, cleaning all the brass bits and the wood lagging. Work was also needed to rectify the worn valve rod bushes. It seems that this had been done in the past so the rods

were reground and the worn bushes replaced, John Emmett kindly completed this work.

It is surprising but there can be quite a lot of noise from worn valve gear, and this has been the case with Consuta. Obviously most stresses are on the main engine crank and cross head bearings, but valve gear can also be a major contributor to engine rattles. The photos here show the size of the slide valve – they are about 5 by 5 inches, so with 50 psi on the engine the load pushing the flat slide valve onto the valve chest is about half a ton; and this valve has to be moved by the valve gear mechanism. A few Consuta engineers will have found out that if steam is applied to the engine when the engine is stationary in mid gear it becomes impossible to move the reversing lever; so not surprising with this sort of load. When the engine is rotating the valve benefits from some lubrication from condensed steam plus oil on the valve face – even so the loads on the D type valve gear are high.



Two photos One showing the engine's valve chest interior with the valve in place.

The other on the left shows the large cylinder ports.

The project refurbishment work will require a new exhaust silencer, a new smokebox, a new funnel and a lot of new pipework. Some pipe sizes are quite large; the main copper steam pipe for example is 1.5" bore with 1/8" wall, the copper exhaust pipe is 2.5" bore but a thinner wall, the steam pipe will need bending to assemble using flange joints or perhaps something neater. We are hoping to make the future removal of the boiler a much easier job, more about this later.

There are many more photos of the work on our Facebook pages.

Public Shows

We had been invited to have a stand at several boat shows this year but without an operational Consuta and limited time had decided that our work effort was better employed on the project work.

The Consuta HLF funded project job opportunity - we need a Project Assistant

Due to the delay of gaining covered accommodation for Consuta, we notified the HLF grant team and requested a time extension. This has been approved, so instead of the project ending December this year the Consuta Project ends December 2019.

We are now looking for a part time Project Assistant to help arrange some of the public activities needed as part of the project. This post will be a paid part time job over the next 14 or so months, the person appointed will need to arrange a variety of talks and 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 and would like to know more, please contact me ASAP.

Best wishes to all.

Brian Smith

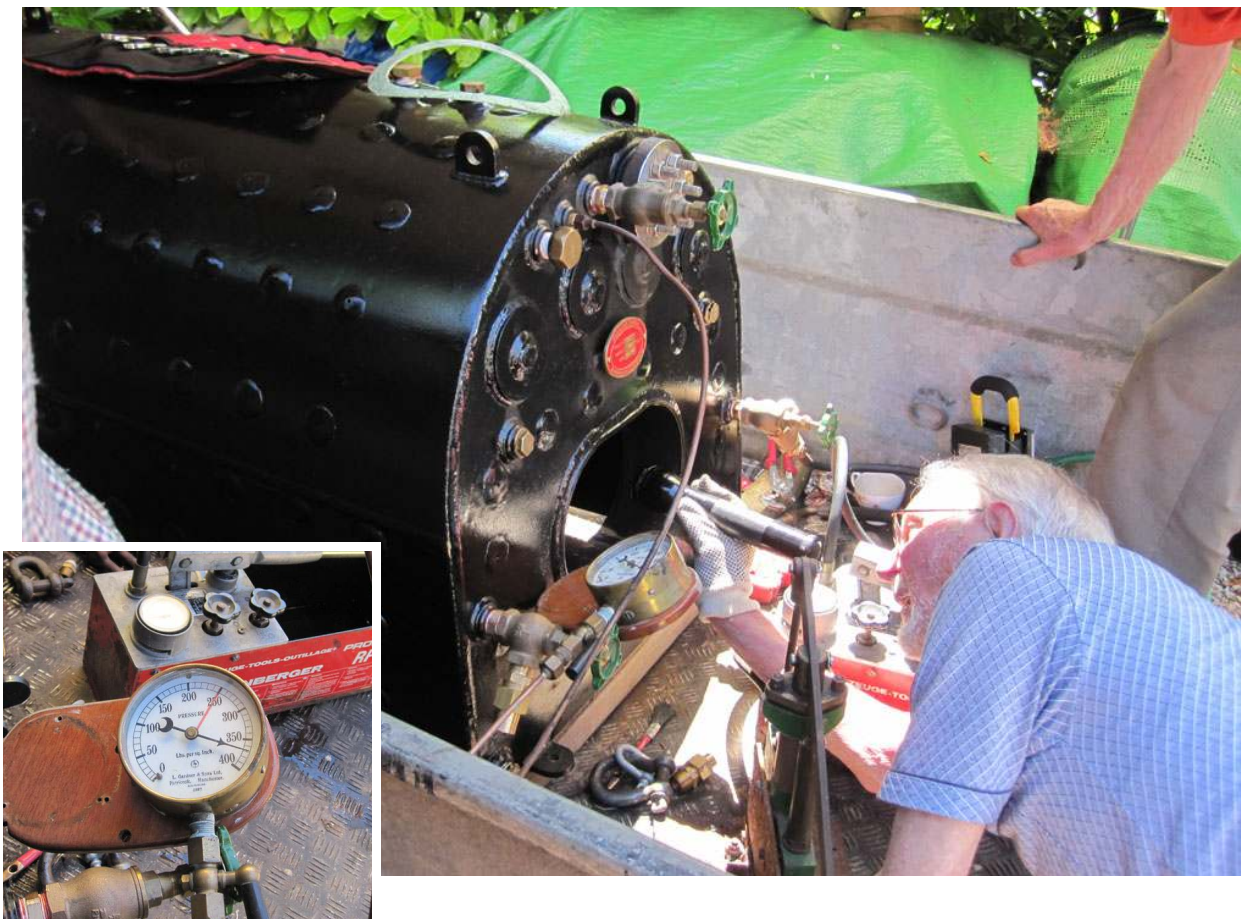
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5th Sept 2018



Trying out some of the new fittings on the boiler, Note the main steam take off is from the backhead. The new boiler was subjected to a hydraulic pressure of 360 psi held for 45 minutes while the inspector looks for any sign of weakness or leakage.

The inset below shows a 400 psi gauge used to check pressure being applied by the hand pump.





*Above, our two work benches, plus an old drilling machine not used so far.
Below a general scene showing Consuta with SL Cygnet in the foreground and two sections of a stitched Saunders hull named Ullula standing vertical on the left.*





Several supporters have taken parts away off site for cleaning or refurbishment.

Above are the two valve rod assemblies

The photos on each side show the work regrinding the engine valve rods, and reamering the engine top rod support.



Below – some supporters take a breather during one of our work party days





The photo above shows the engine bilges after cleaning then painted with two coats of Danboline bilge paint. All bilges in the boiler/engine section have had this treatment so the bilges are now looking pristine.

No oil spills will be tolerated in future.



The engine weighs about 657 lbs.

Surprisingly the engine mounting frame which includes the engine oil drip tray and thrust block weighs 183 lbs – now that is heavy!

Below Paul demonstrates a (better?) future place for the Windermere kettle.

This is just behind the boiler front access panel; looks easy to fill with water and easy to draw off the boiled water into a teapot or thermos, yet remaining safely tucked away when not required.



We cannot show all the work going on, and can only give an idea of the range of jobs being done.

I would like to thank all who have helped and have provided encouragement over the last few months. Its all very exciting but there is still much work to do before we are finished.

We are about to commission some of the metal fabrication work, and start making the new wood casing parts.

Finally sorry for the delay producing this summer edition of our newsletter.

