

STEAMSHIP

FRESHSPRING

SOCIETY

FRESHSPRING NEWS



No.18 Spring 2019

Preserving the past to inspire knowledge for the future

The Steamship Freshspring Society is a registered charity, No.1151907.

Objects of the Charity:

To advance the education of the public through the preservation and operation of a historic steamship, and the promotion of maritime studies particularly amongst young people for the public benefit.

Registered Office: Little Cleave, Lower Cleave, Northam, Devon, EX39 2RH

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Vice President: John Richards

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Keep up to date with progress/news via the Society's website or Facebook page.

Website: www.ssfreshspring.co.uk

Facebook: www.facebook.com/SSFreshspringSociety?fref=ts

Membership Enquiries: Please send an s.a.e. for a form to: Steamship Freshspring Society, c/o Richard Ker, 4 New Street, Appledore, Devon, EX39 1QJ, or you can join online.

Ship Visits & Volunteering on the ship: The ship is open by appointment for groups. Members are welcome to visit on working days, which are on Sundays and Wednesdays. Please call Peter Gillett, our Local Ship Manager, on 01237 237 183 (email: peter.gillett@ssfreshspring.co.uk), or John Puddy on 01237 479 730 so we know to expect you. Limited public openings will be held and advertised locally.

Freshspring News is edited by Brian Gooding, and published by the Steamship Freshspring Society, a registered charity.

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Editor's Ramblings. . . .

It came as a bit of a shock to me the other day to find out that I have been involved with magazines for 30 years. For some reason, I am still at it, and life never seems to get any quieter but I guess if you enjoy doing something you keep going!



The same can be said of volunteering. I have been a volunteer at a local working museum for even longer and I have found it very difficult to even consider standing down. Now a trustee of that museum – again for more years than I want to think about – it is very difficult to let go. While not now involved with the day to day running of the museum (we have a very good manager who does that!), my job is to guide and help him along. Luckily this does not take me away from the days when I go to the museum and get my hands dirty! Like *Freshspring*, we too have a great team of volunteers without whom the museum would simply not open.

With my broader interests, I have met a lot of preservationists (I don't like the word, but that's what we are), and have made a large number of friends. The preservation movement, and particularly the steam world in all its facets, is a great leveller. It matters not one jot what one's background is, whether professional or not, whether rich or poor, we all muck in together and have a great time with lots of fun and banter.

Living 200 miles away, sadly I can't visit the ship as often as I would like, but when I do, I am struck by the way the team works well together, be it the management team, ably led by the globe-trotting John Puddy, or the on board volunteers led by Pete Gillett. I have to admit I am getting a bit worried about the sanity of his close friend 'Scuttlebutt' – see his report in this issue. Seriously, I love to read Scuttlebutt's musings for they bring out exactly what volunteering is about. The old adage of "work hard, play hard" comes to mind. Volunteering is all about people of all ages doing something they enjoy because it's fun –and because they don't have to! The camaraderie can be great.

Without you, we would have no ship, or at least one that now looks so smart and move inexorably forward towards going to sea again. So, if you have thought about lending a hand – there are plenty of 'clean' jobs. We are looking for tour guides, as you will read later on. Fancy a go? You will have to speak to people, though!

Brian Gooding

FRONT COVER: *We thought we'd bring you another aerial view of Freshspring at her berth in Bideford, this one showing her position in the town with the Barge Cafe to the right. As you can see, the car park is adjacent!* **Courtesy Bob Cole, Top Flight UAS**

From the Chair

The winter has not stalled our volunteers from continuing to make excellent progress on the ship. The boatdeck is now complete and a large amount of painting completed. We have a safe stairway fitted to access the boatdeck and during the year, the area can be used for events and an addition to the visitor experience.

I have just had a few weeks away from UK motorcycling in Vietnam with my son. I was able to reflect on our project. It is remarkable how many people are engaged in one way or another. Apart from the ship volunteers we have administration volunteers, IT, finance, events, marketing, PR, fund raising, project management, procurement, membership, newsletter, ship management, H&S, welfare and cake makers. In all, our team comprise over 50 people, all of whom, I believe, are having a great and rewarding time.

Now, we have two employees – Hayley, who you all know, and Charlotte who is our new Project Manager. The fact of the matter is, we, with our very small steamship, have a very big hearted and effective project, which is changing people's lives every day. Of course, we have a very long way to go but with the growing professionalism of our team, I am very sure we will make it and see our little steamer plying the waves to many locations around the UK, providing education and bringing smiles to many faces.

It is also very heartening to see members remaining with us and contributing so much. No month goes by without donations coming in. I thank you for this generosity as it does keep us viable and able to carry out projects both on the ship and in education.

Our objective is to support young people into maritime and engineering careers and I think we are very much on track with this as the future is changing. Virgin Voyages have recently announced that they are building the fourth ship for their new fleet. In the industry there are concerns about potential problems that the cruise industry will face in finding sufficient officers to operate the 110 plus new ships due to come into service within seven years. The Virgin ships will be 110,000gt and will require over 1,000 crew each.

Cruise companies will need to recruit as many as 500,000 in the next ten years. 9,000 will be required for ships currently on order and recruitment and training needs to start now. With



John and his son at large on a quiet road in Vietnam.

ships progressively moving to LNG for fuelling and an increase in polar operations, many new skills will be required. Our aim is to step up our activities to encourage more young people to take up these very rewarding careers.

Given what I have said above, there are other important factors in the maritime skills gap. This is probably not due to a shortage of skills, but to differences in the skills that are supplied and demanded. The problem is that although people do have skills, often the skills they have are not the ones employers want. The maritime sector is setting up an industry-wide programme to attract young people to maritime careers. However, it needs to also consider why any increased emphasis on maritime skills in schools and universities may not help to reduce the sector skills gap.

We, along with the Merchant Navy Training Board, are attending school career events and it is noticeable that many students have little enthusiasm for maritime careers. We need to be able to demonstrate attractive and achievable opportunities. The maritime sector needs to recognise that students have a choice about what skills they acquire and whether they use these skills on the job market. As long as wages in the sector do not reward certain skills, they will either choose not to acquire these skills, or even if they do, they will find employment in other occupations.

Perhaps as part of its 'Shaping our Career Ambition', the UK maritime sector needs to identify the underlying issues that prevent wages from reflecting skills shortages and thus aim to closing the skills gap. The key question is why maritime employers do not raise wages for the type of people that are hard to find. It could be that these businesses are willing to raise wages, but unable to do so. A strong argument is that a firm would not be competitive anymore if it were to raise wages for scarce skills.

This argument is not convincing as if all businesses in an industry experience difficulties hiring a particular skill, an employer that did raise wages for that skill above the going rate would not only attract sufficient applicants, but could potentially choose the best people, thus luring them away from their competitors. It would seem that such a move would make the firm more, not less, competitive. I would be pleased to hear from members on this matter as our job is to encourage young people to gain skills and ambition from school age and to support education leading to addressing skills gaps.

In December, we organised a small Christmas event for local volunteers and members, which was a great success with a very hearty turnout. We had various prizes donated by local shops, businesses and some by volunteers themselves. We are now looking at doing more locally to encourage people to get involved and to thank those who already are.

We have lots going on to prepare the ship for opening during 2019; our aim is to have her looking very much as though the crew have just left. We do desperately need volunteers who can become our Tour Guides. This is crucial to enable us to maximise on visitor potential and it's also quite a fun role.

We plan to fit a mast to original specifications and a suitable tree has already been kindly donated by Lord Clinton along with an extremely generous offer from Haydn

Samuels, who chairs The Britannia Trust, to work with us to create a finished mast. Please have a look at his charity – www.britanniasailingtrust.org – as we aim to work closely with them.

We are also fitting the ensign staff, again as a result of a generous member donation and the Pennant staff is being made by another member. The ship will look rather splendid for this summer, I'm sure.

I have added this sea story which you might find interesting.

The passenger steamer SS *Warrimoo* was quietly knifing its way through the waters of the mid-Pacific on its way from Vancouver to Australia. The navigator had just finished working out a star fix and brought Captain John DS Phillips the result. The *Warrimoo's* position was LAT 0° 31' N and LONG 179 30' W. The date was 31st December 1899. First Mate Payton broke in, "We're only a few miles from the intersection of the Equator and the International Date Line". Captain Phillips was prankish enough to take full advantage of the opportunity for achieving the navigational freak of a lifetime. He called his navigators to the bridge to check and double check the ship's position. He changed course slightly so as to bear directly on his mark. Then he adjusted the engine speed.



Patrons, trustees and volunteers enjoying the Christmas party.
INSET: Simon, the Treasurer, seems pleased with his raffle prize.

The calm weather & clear night worked in his favour. At midnight, the SS *Warrimoo* lay on the Equator at exactly the point where it crossed the International Date Line! The consequences of this bizarre position were many: The forward part (bow) of the ship was in the Southern Hemisphere and in the middle of summer. The rear (stern) was in the Northern Hemisphere and in the middle of winter. The date in the aft part of the ship was 31st December 1899. In the bow (forward) part it was 1st January 1900.

This ship was therefore not only in:

- Two different days,
 - Two different months,
 - Two different years,
 - Two different seasons,
- But in two different centuries – all at the same time!

We do need articles for your Newsletter to keep it interesting for all members so, please consider adding a piece for next time. We are able to consider any subject so please get in touch. Also, we need you to think about the Trust and let us have any thoughts or ideas you might have to improve or add to what we do. We attend quite a few events across the region and volunteers are always very welcome to join us.

We couldn't do it without you all.

John



Bideford had an amazing array of lights around the town last Christmas. Not to be outdone, we fitted a slightly less dazzling display on SS Freshspring. We did maintain pomp and ceremony during the light up, which coincided with the town switch on. We engaged Meryl Ker, who often features in our pictures, to perform the switch on and Wendy provided mulled wine for the assembled crowd (maybe an over statement but the wine was good!).

Treasurer's Report

Before I give an update of our financial position, I want to say a big 'THANK YOU' to those members who generously donate money on a one-off or regular basis.

In the first eight months of our financial year – to 31st August – we received £5,500 in donations. In the following four months, we received £17,000 – a truly amazing sum! Much of this resulted from our 'Appeal' letter, a letter which also brought in £1,000 from non-members. Most of the money donated was 'Gift Aided' so we gained a further 25% in tax benefits.

For the reasons I will outline below, we need to keep up this level of income from donations, so please continue to raise awareness of what we are doing with your family, friends and other contacts and let's see if we can raise an even larger sum in the months to come!

Our bank details are:

Account name – Steamship Freshspring Society

Account number – 00023232. Sort code 40-52-40 – and please use your initials and surname as the reference.

At the time of writing (30th January), we have approximately £79,000 in the bank – but we also have some big outstanding bills! When we applied for the Our Heritage grant, we committed to a total spend of (round figures) £119,000, of which £105,100 will be covered by grants. I say 'will be' because although we have received £99,000, we will not receive the remaining £6,000 until after the whole project is complete.

Of the £119,000 we have already spent roughly £64,000 leaving £55,000 to be covered over the next 13 months, so in reality – at this point – our 'free' cash is £24,000. Better than it was but still not enough to be comfortable – which is why I constantly appeal for funds!

Help from Tesco! If you shop at Tesco you'll know they run 'Bags of Help' schemes where, after you've been through the till, you are given tokens to 'vote' for one of three charities being featured by the store. *Freshspring* will be one of these charities in the Westward Ho! and Bideford stores during March and April! If you are local, PLEASE use your tokens – and ask your friends to do likewise – to benefit *Freshspring*.

If you are not local, you can still help because the tokens can come from anywhere in the UK so, gather as many as you can and post them to me or John before the end of March – we will happily refund postage if requested! We COULD gain £4,000 from this opportunity – but only with your help!

Simon Tattersall

Ship Report

My children have been enraptured with the world of Harry Potter; so their Christmas present this year was the studio tour. Part of the tour around the film sets used to make the films of Harry Potter was the train station platform of 9^¾. You turn the corner to see the famous red steam locomotive. Steam pouring out, with the hustle and bustle of people all around trying to get on to see parts of the train along with an occasional whistle showing the train's romantic power. I'm sure for many of the readers the taste, smell and sight of any steam-powered engine is pure joy to the soul.

Before Christmas, many lists had been created for our own steam engine for the coming year. Now well into the new year, our volunteers are enthusiastically tackling said lists. To name just a few jobs underway: the main and bridge decks are being prepared and painted, schematics are being drawn and numbered, noting every part of the engine room. The boat deck wooden plugs planed down, ship's old bathroom being painted to house the ship's office. This will enable the Master's cabin to be renovated.

We're aiming high for the April opening to the public again, so please, if you can, come down and visit the ship to see all the improvements that our hardworking volunteers have made. Certainly, if you come across the vessel whether on a visitor or work day, you will see the hustle and bustle. You might even see the smoke from the newly installed wood burner in the crew's mess (thanks to John Cooper) and maybe before the summer is out we might even get a whistle to sound bringing a positive vibe for all to hear of the romanticism of a time when steam ruled the world.

Best regards

Jon



Other things happening at Freshspring!

Project Manager

We are roughly mid way through our two year 'Our Heritage' project and we realised late last year that, for various reasons and as a result of dedicated volunteer input, we were heading for an underspend on our £119,000 commitment. To ensure that we were not in a position of having to return grant money to the Lottery, we negotiated a 're-profile' of the expenditure to allow us to use the underspend to employ a Project Manager on a 12 month, two day a week, contract.

I am delighted to say that after interviewing three of the five job applicants, we appointed Charlotte Squire as Project Manager, and she started with us on 9th January. Charlotte's application demonstrated that she has all the skills and experience that we sought, and her interview strongly supported her application. Generally, Charlotte will be with us on Wednesday and Friday each week.

There will be more about – and from – Charlotte in the next magazine, but her job is to ensure that, by the end of the OH project, everything that we said we would do will have been demonstrably finished and fully reported. To achieve this, she will be working closely with many people, but particularly Jon Short, Pete Gillett, Hayley Buscombe, Anne Budd and Mike Blackman – all of whom are involved with parts of the project.

New Trustee

Over the last few years we have been working to achieve two objectives to take the Trust forward. The first is to recruit Trustees who have the skills that will support the Trust's future, and the second is to find people to help manage the way forward. Anne Budd joined us in late 2017, having spent her life in IT and data management. She started by creating the project management system to handle the OH project, but she wanted to get more involved in web management, social media and related issues.

Many of the Trustees are 'of a certain age' and realised that we really needed a Trustee who not only understood IT issues, but could ensure that the Trust meets the standards required by the Charity Commission. I'm delighted that Anne agreed to take on that role – I for one feel that I can sleep a little easier at night!

Membership

Richard Ker, our hardworking Membership Secretary, spends a lot of time and money each month trying to get people to renew their membership. We have now introduced a direct debit system called GoCardless so, when Richard invites your renewal, PLEASE sign up with this system – it saves a huge amount of everyone's time!

Annual General Meeting

This year the AGM will be held at 2pm on Saturday 8th June in Bideford. Formal notice, accounts and other relevant information will appear in the May edition of *Freshspring News*.

Banners

By the time you read this, the new protective banners for the wheelhouse – which, when in place, look just like the wheelhouse – should be in use. Hopefully the last remedial jobs on the wheelhouse will also have been completed.

Masts

We have ordered an ensign staff for the stern of the ship, and we have been donated a tree from which a new main mast will be made.

Canopy

We will shortly be ordering a canopy to cover the boatdeck which, with side screens, will allow us to hold events whatever the weather!

Website

Our site was developed before the ship came to Bideford and it really needs updating, so we have started this process and in due course a new site will appear! Ideally we would like to employ a professional website designer to do this, but that will have to wait until either someone offers or we obtain another grant!

Lottery Grants

The existing grants end on 31st January and will be replaced by a new set. Once we know more about these – and they will be available to view in early February – we can talk to the Lottery office about how we best move forward.

Finally.....Situations vacant!!!

Tour Guides – we are planning to open the ship to the public from 6th April on various days every week. To make this a success, we need people who are happy to show visitors around and talk a bit about the ship and get them to part with money. Training is provided! If you think this might be fun, please contact Hayley.buscombe@ssfreshspring.co.uk, leaving your 'phone number so that she can contact you for a chat.

PR person – we need someone to help promote us through the media, whether local or national. If you can help us with this, please contact simon.tattersall@ssfreshspring.co.uk.

Fundraising – this is a key area for us as, without continuous effort, we will not raise the funds we need either to contribute our percentage of grant aided projects, or cover our annual costs! We need help to identify funds that are suitable for us, to collate information and complete application forms, keep a diary of application timetables and generally help to keep on top of our fundraising work. Can you help? If so, please contact john.puddy@ssfreshspring.co.uk or simon.tattersall@ssfreshspring.co.uk as soon as possible!

Simon Tattersall

Scuttlebutt from the Quay

To **liven** up the dark days of winter, we held our Christmas Bash at the Old Custom House in Bideford. Patrons, trustees and volunteers positively thronged, tempted, possibly, by the ample supplies of *Freshspring* beer and the extremely generous buffet. Indeed, there was so much food left over that we were treated to the glorious sight of the great and the good scrambling over each other to see who could fill the largest doggy bag to take home.

The chairman's speech this year was much enhanced by his wearing a wondrously festive hat given to him, we think, as a token of appreciation for all his previous monologues and it really worked. He will no doubt treasure this remarkable item of headgear and we fully expect to see it again.

Towards the end of the evening, I was privileged to be able to introduce an extract from the archives of the legendary Scuttlebutt who entrusted me with the document when I last visited him in rehab. He was looking absolutely awful on this occasion, a vast improvement on his normal appearance.

His has been hard life, he claims, as the sole surviving orphaned son of a childless couple who tragically died some time before he was born. His early life, as indeed most of his life, is shrouded in mystery. He owes his love of the sea to his time living under Brighton's Palace Pier, having absconded from a snail farm in the Midlands when he was quite young. His subsequent career, combining exotic dancing with water divining, led inevitably to his wilderness years. This all makes him a perfect fit as one of our on board volunteers.

Scuttlebutt is currently out of rehab and here is his ode to the *SS Freshspring*.

Tis on the good ship *Freshspring*, in Bideford, her bottom all muddy
Her figurehead is the man we know as ruddy Puddy
As Captain we have no-one, but then we're all mates together
Chipping, scraping and painting, going like hell for leather
In summertime it's a breeze, with tea & cake down on the river
In wintertime it's not so hot, just the thought can make you shiver
But nonetheless we soldier on, with more tea & cake in the galley
There's very little room in there, you need to be bally pally
Our volunteers are a wondrous bunch, as mixed as you might hope
From painting, welding, woodwork to funny knots in rope
We celebrate all your hard work, so for you this Christmas bash
But that's enough drivel from me, I'm off to the bar to get smashed

Pete Gillett



Winter News from the Engine Room

Well, there's no exciting news from the engine room but I have to say that there has been a lot of hard work put in by the team, as ever.

We have started on the vast job of trying to produce a plan of all the unseen piping in the engine room. This means lifting all the steel floor plates in turn and photographing what is "down there". In some cases, it is an array of intertwined pipes all for something, be it fresh water, boiler feed water, bilge water, sea water or fire pump water.

Roger Palmer, a professional draughtsman volunteer, has undertaken the job of producing the plan. He has forsaken his Computer Aided Design methods and his 3D printing and got out his old fashioned drawing board tackle in order to be able to produce the drawing on the drawing board in the wheelhouse.

We hope, in the end, to be able to identify every valve and to know what it does in the whole scheme of operating the ship but this will take some time. Lifting the floor plates is best done when there are very few visitors so our time is limited.



Another heavy job that has been tackled recently is the removal of the forward condenser end door in order to dry out the sea water wetted surfaces and to enable the condition of the condenser tubes to be assessed. Every retaining nut is corroded to its stud by sea water leakage and this has required use of an oxy/propane torch to ease off the 3/4in. nuts.



We have now started some refresher training in the use of oxy/propane equipment for all of us down below, and are all looking forward to the spring and some warmer conditions in the engine room.

John M Cooper

Educational and Project Update

Following on from our meeting with Dr Paul Matthews and a student from the Computer Science & Creative Technologies Department at the University of the West of England (UWE) in October, John Puddy and I visited UWE on 21st November and met with three more of the students involved in the children's website project. It was a very positive visit with good progress made, including a few early mock ups for the website and the setting of key milestones. Since then, the students have continued to develop the design.

One of the students has also just visited the ship in order to start the process of creating a 3D tour. This will enable wheelchair users and other visitors who are unable to access below deck and the wheelhouse to view the whole of the ship.

Langtree School, who had the Engineering Boxes in Autumn and completed the project with a visit to the ship in October, have since sent us some useful feedback along with some lovely photos of their visit.

"The relation between the content and everyday life was important in inspiring the children The practical tasks were pivotal in motivating the children."

Comments from their feedback, along with that of other schools have helped to inform a review of both the boxes and the ship visits leading to a few minor adjustments. I have been looking into sourcing some of the consumable resources so that we do not have to spend so much time preparing the boxes each time they go out.

The third meeting of the Ship Interpretation Steering



Up on the bridge with Hayley... How do you steer this thing?



Having a go with the engine room telegraph.



Group is due to take place on the 11th February. Our focus will be the ship's opening to the public in April and particularly the creation of an information leaflet for visitors to the ship.

With the opening in mind, we have just purchased some teddy bears and the plan is to dress them as the crew and place them appropriately around the ship. Many thanks to Miyazaki Yuko and her craft group/knitting ladies who have volunteered to make the outfits. We eagerly await their completion!

Charlotte Squire, our new Project Manager, and I are currently in the process of advertising for/recruiting Ship Tour Guides/Stewards to take the pressure off the ship volunteers who did a sterling job last year. If you or anyone you know would like to become a steward, please contact me: hayley.buscombe@ssfreshspring.co.uk. Full training will be provided.

**Hayley Buscombe
Educational &
Project Officer**

*Trying out the crew bunks.
Good to see smiles all round.*



Letters to the Editor

Heard Brothers Motors

Dear Editor

In the Winter 2018 issue of *Freshspring News*, you published a photo of the roof of Heard Brothers Motors in Bideford.

As soon as I saw the timber trusses with a curved top and cross lattice bracing I knew I had seen such things before – on aircraft hangars at Duxford and the RAF Museum, Hendon. A bit of research confirmed them to be 'Belfast' roof trusses, named after their place of origin. It seems that the invention of bitumen roofing felt allowed for much lighter supporting roof structures and longer clear spans than was required for tiles and slates, and the Belfast timber roof truss was a response to that.

They were first seen in the 1860s and were commonly used in industrial buildings until around 1920 where a clear span was required and so were widely used in aircraft hangars during the First World War – hence the surviving structures at Duxford and Hendon. I have tried to find some connection between the Belfast roof truss and the *SS Freshspring* and have almost completely failed.

I say almost because during the First World War some curved top hangars were apparently built on what is now Lytham Quays with the intention of building 'Felixstowe' flying boats. That is not far from Lytham Creek and I wonder if they may have had some connection with the Lytham Shipbuilding & Engineering Co. (who built *SS Freshspring*) but I cannot confirm this. However, a photo inside the hangars also suggests the roof trusses, though of Belfast shape, were made of steel rather than wood and were thus not technically Belfast trusses.

Having said that, it seems that Belfast roofs were popular for sea port buildings, and Harland & Wolff's records show that Belfast's shipyards in the 1920s and 1930s were almost entirely made up of buildings with Belfast roofs, so it is quite possible the Lytham company had some.

Maybe other members can enlighten us more.

Roger Stephen
Chesham, Bucks

Another Belfast truss roof can be seen in the Charles Burrell Museum in Thetford in Norfolk. Burrells were prolific builders of road steam engines, in particular, but became part of the ill-fated AGE group, which collapsed in the early 1930s. Sadly not much of the Burrell works survives in the town but the former paint shop has and now houses the museum. Being a paint shop, a wide, unobstructed space was required, so a Belfast truss roof was an obvious solution. We are lucky that it has survived when so much else has been replaced by housing or a supermarket. If you're in Norfolk, the museum is well worth a visit, but do check on open days (normally Saturdays in the season). BG



The Charles Burrell Museum, photographed in 2014, with the obvious outline of a Belfast truss roof. BG



An inside view of the Charles Burrell Museum, showing the Belfast truss roof. Note the engines parked below behind the doors. BG

Brilliant Brunel

Looking for something for the children/grandchildren for Christmas? Maryann Soper has written this 32 page book about Brunel for children. It is interestingly illustrated by Ryan Isaac, and covers the great man's main achievements.

Copies may be purchase from Maryann Soper, 2 Exmouth Cottages, Lower Ashton, Exeter, Devon, EX6 7QJ.

Payment by cheque made to 'Maryann Soper'. Please quote 'Brilliant Freshspring 2018' when ordering as Maryann will donate £1 from each sale to the Society.



Restoring the steam tug 'Noordzee'

Fred van de Geer

October 2018: eight tonnes of coal will lower the boat back on the waterline.



In a few years, the steam tug *Noordzee* will become a centenarian. Like many of our treasured survivors, this achievement was far from certain. Built in 1922, its birth was a joint effort between two neighbouring Hamburg shipyards: Janssen & Schmilinsky built the boat, whilst Blohm & Vos built both the boiler and compound steam engine. The sea-going tug was ordered by Blohm & Vos to the design of the Fairplay IX and baptised as B&V XII.

An educated guess to the duties carried out by B&V XII, during the following twenty-five years of service, consist of manoeuvring ships in and out of dry docks, and on the river Elbe into the North Sea, certainly the most famous being the battleship *Bismarck*. From 1948 to 1959, the tug was no longer used and placed in reserve. The boat was finally purchased by a diving and salvage company called Sievers, in Cuxhaven at the estuary of the Elbe. In 1970, she was sold to the Fishing Company Nordsee, and after another five years, its fate was pretty much sealed when it was bought by the trading company AC Slooten in the north of Holland. The trading company was really a shipbreaker. This could have been the end of the boat's story, if it were not for the passion and foresight of one C P Jongert.

Kees was the youngest son of Jan Jongert Sr, who founded the renowned luxury yacht builder Jongert based in Medemblik. The boat was renamed *Noordzee* and whilst birthed at the shipyard, it was restored to an exceptionally high standard. For years, the tug was seen at a seriously wide array of events, including internationally, mainly in Germany though once the crossing was made into English waters.



Lifting part of the superstructure to enable removal of the boiler.

In 2010, Mr Jongert passed away. During the following years, the *Noordzee* deteriorated rapidly. Anyone owning a boat knows that they require a LOT of continuous maintenance. At an alarming rate, the *Noordzee* headed towards the point of no return. Several long-term crew members and Kees's widow Monika, created a solution by bringing the boat into a trust, its sixth owner. In 2016, the boat was moved from Medemblik to Den Helder, the home of the Royal Dutch Navy, where a suitable shipyard was found to help halt the deterioration, Damen Shipyard.



Out with the old: the original 96 year old boiler sees daylight again...



... In with the new: the replacement boiler is ready to be lowered into its new home.

Soon the initial enthusiasm was dealt a serious blow. At a boiler inspection, the news was bad. How bad only became apparent once the boiler was lifted out several years later: the original twin furnace Scotch type coal-fired boiler was dangerously thin in places. The hunt was on for a suitable replacement. A newly constructed boiler was contemplated, but soon discarded due to unsurmountable costs. With some luck, a boiler was found when a steam-powered floating crane was destined to be scrapped near Rotterdam. The size of its boiler was a near perfect match, the condition nearly as new, but it had only one furnace. Calculations were carried out and the larger grate surface, combined with a higher working pressure (13 bar instead of 10.5 – 190psi against 150psi), allowed for a decision to be made. A deal was struck, after several Dutch funding streams had pledged sufficient money to purchase the boiler and carry out the necessary transfer.

This sounds simple enough, but certainly wasn't. First, a large section of the superstructure behind the wheelhouse, had to be cut away and lifted off. The boiler



The cavernous space left by the boiler, not seen since 1922. The panels to the coal bunkers have been removed.



After lots of hard graft from the volunteers, the boiler room is ready to receive the replacement boiler.



The anchor winch is being checked to ensure it meets modern day regulations.



High and dry on the Damen Shipyard slipway, with steam cleaning in progress.



Volunteers tally up thousands of man hours.



With sacrificial zinc anodes in place; she is ready for relaunch.

is partly located underneath the wheelhouse, so it needed to be pulled horizontally towards the stern before being lifted out using a mobile crane.

During the following weeks, the cavernous space left behind, including the coal bunkers on either side of the boiler, were cleaned, repainted and prepared to take the replacement boiler. Under guidance from staff at the Damen shipyard, all this work was carried out by a dedicated team of volunteers (sounds familiar?).

Soon the time came to fit the replacement boiler, but first the *Noordzee* was hauled up a slipway to enable cleaning below the waterline. Here some pinholes were found, which explained the bilge water, but still a bit of a scary find. With all this work carried out, the time came to fit the new boiler. As you can imagine, the amount of work to other parts of the boat would fill the entire magazine, but the upshot is that the *Noordzee* is now well on its way to regain its former glory.

However, the one great disadvantage of using a boiler from another vessel as a replacement is that all the fittings and pipework are located in different positions to the original. The result is that not only did the old boiler become redundant due to ill health, its arteries were redundant as well. Where cleaning, painting and polishing can be done by the volunteers, the making of more than 22 necessary connections is professional work, requiring tested materials and specialist equipment. This was always anticipated by the team, but the problem occurred that the funding streams were depleted.

It would be fantastic to get the *Noordzee* back in steam again. A lot of people visit Dutch steam events, like Dordt in Stoom, where for many years the *Noordzee* was present. With your help, you could see this magnificent boat at the next event. The team would appreciate any donation which you can make using IBAN number NL18 RABO 0159881048.

• *This article first appeared in the January 2019 issue of Vintage Spirit magazine. www.vintagespirit.co.uk*



A floating raft was used to signwrite the name on the bow.

Further details of the *Noordzee* are:

- Length 22.8metres (74.8ft)
- Compound steam engine, 320ihp, maximum 140rpm.
- Four bladed screw, 2.05metres diameter (6.7ft)
- Other steam driven auxiliary equipment: steering engine, anchor winch, generator (lighting), duplex general duty pump, ejector and a steam turbine generator.

www.stoomsleepbootnoordzee.nl, the trust's webpage, includes several photos and videos. Several more video clips can be found on YouTube and up to date developments can be found on the Stoomsleepboot Noordzee Facebook link.

New members

We welcome the following new members of the Society:

Mr Peter Bell

Dr John Pook

Mr Mike Greener

Harrogate, Yorks

Appledore, Devon

Fremington, Devon

Thank you!

Thank you very much to two members who generously supported our appeal for the ensign staff and ensign. The staff has been delivered and we await the ensigns.

Tools needed...

We are now appealing for tools for our volunteers. We are very short of all tools but we would immediately benefit from:

An Inverter welding set at £260.

Three angle grinders, one 230mm and two 115mm all at 110 volt supply.

The total cost is £200.

If you can help with the cost of any of these items, please contact John Puddy.

Thank you very much.

Volunteer Tour Guides

SS Freshspring officially opens for the 2019 season on Saturday 6th April. She's looking good, thanks to the hard work of our ship volunteers. Now we would like your help to show her off.

Could you see yourself as a Volunteer Tour Guide, welcoming visitors onboard *SS Freshspring*?

We're keen to give our visitors a first class experience and wondered if you'd like to be part of it?

No previous experience is needed as full training will be given, but you do need an enthusiastic and friendly nature, with a talent for communicating.

A further interest could be working with children alongside our Education & Project Officer, in schools, events and on the ship.

Want to know more?

Please contact Hayley Buscombe, Educational & Project Officer

Email: hayley.buscombe@ssfreshspring.co.uk

Diesel at Sea

John Puddy

Rudolf Diesel, who was born in Paris in 1858, invented the diesel engine in 1892. Little did he know that within 60 years it would drive the world's shipping and most prime movers on land.

Marine propulsion has developed with efficiencies which were beyond imagination in steam propulsion. It has been a complex segment of the maritime industry over the years as more power is squeezed from less fuel. With the size of ships increasing, the size and power output of engines has also increased. These engines are relatively environmentally efficient in that electronic control of fuel injection and exhaust valves are used, making smokeless operation possible at any load condition.

A marine triple expansion steam engine might achieve 10-15% efficiency, that is not counting the efficiency of generating steam, a well run railway locomotive could achieve and overall efficiency of 7%. Add to this, the space required for machinery and boilers, it is clear that shipowners would jump at the chance to install machinery that would release cargo space.

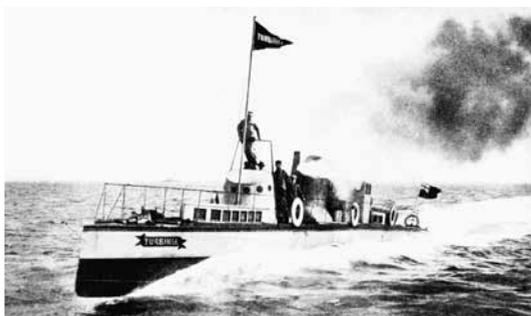
Moving on to internal combustion engines, a typical car petrol engine gives around 35%, assuming fuel injection, a lorry engine some 45%.

In a marine environment, efficiencies as high as 54.4% have been achieved in MAN580ME-C7 engines. Higher results have been achieved in gas turbines, particularly if used in a combined cycle (operating in tandem) where 61% is possible.

This clearly shows that once the diesel had taken a grip, steam was quickly abandoned as a power source in ships.

While Charles Parsons was dramatically unveiling his steam turbine at the Spithead Review in 1897 with his speedboat *Turbinia*, Rudolf Diesel was inventing his 'Diesel' engine, the first operating model being displayed during the same year that *Turbinia* made its famous run.

Coal-fired steamers effectively



Turbinia.



SS Dresden.

ended the age of sail in the late 19th century; however, the steam turbine and diesel engine had the world's coaling stations closed by the mid-1950s.

In 1903, the first diesel engine for ship propulsion was built in France by Messrs Brochet and Frederick Dyckhoff, who worked in conjunction with Dr Diesel. The engine was 20hp, having two opposed pistons on the four stroke cycle. It was used for propelling a canal boat, the *Petit Pierre*. She was an innovative vessel which also had a variable pitch propeller. This engine proved so successful that larger versions of several hundred horsepower were installed in several French submarines. This military application might have contributed to Rudolf Diesel's mysterious death when he disappeared from *SS Dresden*, a cross channel ferry in 1913. His body was found a few days later by the coastguard.

The first four stroke cycle reversing marine engines were built by Messrs Nobel Brothers, St Petersburg, who worked with Dr Diesel.



Vandal.



Venoge.



Selandia.

The first diesel engines installed in a ship's hull were three cylinder engines fitted to the 75 metre *Vandal* in 1903. She was a shallow draught Russian tanker and was also the world's first diesel-electric powered ship.

The development of these large and commercially viable engines was preceded by another Sulzer diesel in 1904, which was fitted to a small cargo vessel, the *Venoge*. This engine had to be stopped and then restarted for operating the ship astern, a problem overcome only a year later when Sulzer built a two stroke direct reversible engine. This was only one year before Denmark's Burmeister & Wain-engined *Selandia* was delivered to the Danish & East Asiatic Company as the world's first ocean going motor ship.

The *Selandia* was a marvel of her time and she soon sparked a revolution in shipping and ship design. Her engines were four stroke and reversible. Each engine delivered 932kw at 140rpm. Within months, another diesel-powered ship was

completed. She was Hamburg Sud's 3,693gt *Monte Penedo* and was the first ship to be powered by two stroke Diesels. These twin Sulzer-built engines combined, developed 1,250kw at 160rpm.



Monte Penedo.

In four stroke engines, the power stroke occurs every two turns of the crankshaft and in two stroke engines the power stroke is every revolution. The two stroke system continues to this day with the largest marine diesels normally using the two stroke principle and smaller faster engines four stroke.



Yngaren.

The famous Doxford engine was developed by William Doxford & Sons, Sunderland. William Doxford founded the company in 1840 and from 1870, it was based in Pallion, Sunderland, on the River Wear. The company was managed by William Doxford's four sons following his death in 1882.

In the 1970s, a new all-weather Pallion yard was built which could build two ships of up to 30,000 tons deadweight side-by-side. The steel came in at one end, and the completed ship left from the other with engines installed and sometimes with the machinery running. The company was noted for building both ships and engines, the last ship built at Pallion was floated out of the yard in 1989 after which it closed as a shipbuilding yard.

The Doxford hallmark was the vertically opposed piston two stroke engine using a single crankshaft with connecting rods for both the lower and upper pistons. The company started production with a four cylinder engine which was installed in a Swedish ship called *Yngaren* in 1921. They later went on to develop the highly economical three cylinder version known as the "economical", an engine which consumed only six tons a day. After the war, a higher output engine was produced with up to six cylinders, known as the P engine. This was followed by a stronger J series engine with up to nine cylinders. Interestingly, the P and J came from the Doxford engine designer of the time, Percy Jackson. During the fuel crisis of the 1970s, Doxford tried to address the issue with several new designs including the stillborn seahorse project and the short stroke 58JS model which went into production in 1977. However, this was too little too late and only seven units were completed, the last of which was installed in a great lakes bulk carrier *Canadian Pioneer* which has been decommissioned within the last ten years. One of the



Canadian Pioneer.



The Kaising, similar in design to the Dumura.

small versions of this engine is at Beamish museum after having spent many years at South Tyneside Marine School as a working exhibit.

Sadly Great Britain no longer builds large oil burning engines and Doxfords was one of the last companies to build both engines and ships. After Doxfords closed its gates, I did go to Sunderland to see what remained of great British shipbuilding and found only enormous derelict buildings dominating the skyline. However, the old shipyard is now occupied by Pallion Engineering Limited, whilst a part of the former engine works is occupied by Sunderland Wall climbing centre.

In 1984, a ship arrived at Lundy, where we lived; she was called *Fumura* and was a large and ancient

freighter. As islanders, we were always interested in visiting the ships in the bay and *Fumura* was no exception. It appeared that her previous name was *Dumura*. She was a Greek registered ship and in poor condition. Indeed, when sailing out to the ship in our Coble, we could see right into the hull above the rudder. We were welcomed aboard by the Master who was wearing splendid white tropical gear and invited us to stay for a barbeque. My interest was looking around the ship, particularly the engine room. To my delight, the main engine was a Doxford P of six cylinders. This was the first time I had seen a large Doxford and it was a magnificent sight at three stories high. Unfortunately *Fumura* had been refused into Bristol to load and was awaiting orders. I fear her orders would have been "proceed for demolition". The barbeque was fuelled by ripping up rotten deck planking but the food was excellent.

Although modern high speed diesel engines capable of operating at 1,200rpm and above are available, few see marine applications outside of the workcraft, fishing and yachting sectors.

Medium speed engines of 300 to 1,200rpm are the main drivers of generating sets as well as providing motive power for tugs, etc. The very large engines in this category are capable of producing in excess of 30,000bhp and are used to power ships such as ferries and ro-ro vessels where the vessels configuration is not suited to tall two stroke low speed engines. These engines though are in general the choice for many commercial ships because of power and economy.

The largest engines used at sea can be 50 feet tall and weigh over 2,000 tons; they have power outputs of up to 80mw and can operate between 60rpm and 120rpm. The slow speed of these engines eliminates the need for gearing to the propeller which higher speed engines require and they can burn the cheapest fuel: heavy fuel or bunker C.

Many of the largest engines are built under licence through MAN B&W Diesel, a subsidiary of the German MAN AG group which acquired Burmeister & Wain (B&W) in 1980 and the very well known Wärtsilä which acquired the Swiss based Sulzer in 1997.

The Wärtsilä RT-flex96C is the largest and most powerful diesel engine in the world today. Built in Finland, the RT-flex96C's fourteen cylinders can deliver 80,080kw of power, enough to power an entire suburban town. The engine is 14 cylinders with a cylinder bore of 38 inches and a stroke of 98 inches, with each cylinder displacing 1,820 litres and producing 7,780hp. The engine is 90 feet long, weighs 2,300 tons and stands five stories high. The engine exceeds 50% thermal efficiency which means 50% of fuel is converted into energy. The big Wärtsilä at its most economical speed consumes 270 to 330 tonnes of fuel in a 24 hour period. Like most modern marine engines, these engines have been developed with parts commonality so they can be delivered in a number of cylinder variations.

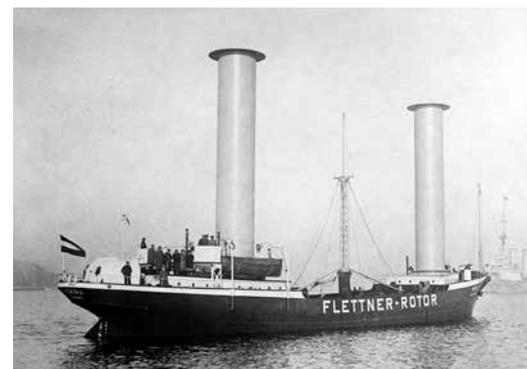
With tightening regulations on funnel emissions, there is an increasing demand for smokeless engines and from 1993 engines have incorporated common rail fuel injection and integral electronic control. The first of these engines built by Sulzer as the RT-flex system was installed in a vessel during 2001. To explain, common rail is a tube which carries fuel under high pressure (up to 2,000 bar). The fuel is carried to computer controlled injector valves and does away with the older distribution type injector pump. The system provides superior combustion by maintaining the optimum fuel injection pressure across the engine speed range. Some engines are fitted with a selective shut off of single injectors and optimised exhaust valve timing to help keep smoke emissions down. Valve actuation can also be electronically controlled doing away with a conventional camshaft.

The trade off with these sophisticated engines is cost of construction and a more sophisticated maintenance regime.

As engine development continues, two goals reign: better fuel economy and less air pollution. Space is also being a factor with ship owners wanting maximum space for cargo thus we see more compact diesels developed as well as a move towards electro mechanical propulsion. Diesel generating sets can be placed where convenient and can be connected to propulsion units such as Azipods using electric cables. The system allows for optimisation of power with constant speed generators switching on and off to match power requirements. However, the steps in power from generators with big engines being engaged or disengaged dictate preferable speed windows based on fuel economy. Some speed ranges need to be avoided as they require power plants to run a low efficiency. Cruise ships, particularly require flexibility in speed as rarely do two routes require the same speed. A way of improving economy which is being



Queen Mary 2.



Buckau.

developed is to adjust rotational speed of generators. Consumption is minimised at around 85% load when the engine is operated at constant speed. Adjusting the speed allows for finding the optimal consumption at all operating conditions

The *Queen Mary 2* uses four Wärtsilä 16v46 common rail engines, each with an output of 22,840bhp at 514rpm in conjunction with two GE gas turbine generator sets. The combined diesel and gas turbine system provides 157,000hp and a top speed of over 30 knots.

The future

This is very much another subject and emissions are a hot topic since the lead up to the 0.1% sulphur cap in emission control areas on 1st Jan 2015. Engine builders are focusing development, some featuring exhaust gas recirculation. Dual fuel engines are now common and liquefied natural gas is a fuel for the future and bunker fuel is giving

way to distillate fuels. Some ships are storing power in batteries for peak demand and some short hop ferries in Norway are all electric, simply recharging during turn around. Ports are using sniffer drones to monitor funnel emissions and the days of the smoking motor ship are all but over. Autonomous shipping is now a reality with significant commercial advantages.

Energysail has developed wind-assisted propulsion featuring solar panels. A pioneering Dutch company has operated its shipping business using only sail-driven vessels since 2009. Now, less adventurous ship owners are looking to wind-assisted ship propulsion with some designs offering realistic potential for fuel saving. The hybrid Flettner rotor concept is now considered the most realistic for fuel savings with potential savings of in excess of 18%.

Anton Flettner was born in November 1885 and died in December 1961. He was a German aviation engineer and inventor. The *Buckau* was the first Flettner Rotor Ship, designed by Flettner and built in 1924. So we return to sail, the original non-human power source at sea.

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By arrangement with MJM Sports of Bideford, we have arranged a range of Society clothing to suit all tastes.

ORDERING

You can order online at: <http://mjm-sports.co.uk/steamship-freshspring-society> or by phone, using a card payment: 01237 477 757.

You may also order by post by using the form below and posting to the address below. Please enter the number of items you require in the box below the illustrations, and the size on the line adjacent. If you require additional items of a different size, please note that in the space below marked 'NOTES'.

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Freshspring Steam Beer!

The Steamship Freshspring Society has teamed up with Bideford's Clearwater Brewery to produce 'Freshspring Steam Beer'.

The Freshspring Beer is 4.5% abv, hand crafted and is a light copper colour. Taste is defined as: citrus notes and nutty with a light bitterness... very drinkable!

500ml brown bottles are available and they are 'bottle conditioned' which means some of the active ingredients are present in the bottle. Generally this gives a more intense flavour but does mean that the bottle needs to stand before drinking to allow it to settle.

The beer is available direct from the brewery:
6x500ml cases for £11.40 and 12x500ml cases for £21.85.

Delivery within 20 miles of Bideford are free, but for everywhere else in the country, there will be a £12 delivery charge and your order will be sent by courier.

Orders can be placed either by email to sales@clearwaterbrewery.co.uk or by phone on 01237 420 492. Payment will need to be made in advance either by BACS (call the brewery for bank details) or by sending a cheque made payable to [Clearwater Brewery Ltd](#) and sending to:

Clearwater Brewery Ltd
Unit 1 Little Court
Manteo Way
Bideford
Devon
EX39 4FG



Leaving a legacy to the SS Freshspring Society

The Steamship Freshspring Society has benefitted greatly from the generosity of its members and friends who have left or given money to the Society.

Legacies provide very necessary financial support in helping the Society to meet its stated objectives of preserving the past and inspiring knowledge for the future

If you would like to think of giving the SS Freshspring Society a legacy, it could not be easier: The following codicil can be completed by you, witnessed, and kept with your Will.

CODICIL

I (full name).....

of (full address).....

.....
declare this to be the (1st/2nd/other.....) codicil to my Will dated.....

I give, free of Inheritance Tax, the sum of

£..... (.....pounds)
to the SS Freshspring Society of Little Cleave, Lower Cleave, Northam, Devon EX39 2RH
(Registered Charity Number 1151907), absolutely for its general charitable purposes.
In all other respects I confirm my said Will.

Testator's signature:.....Date.....

Signed in the presence of:

First witness
Signature

Second Witness
Signature

.....
Full name

.....
Full name

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Address

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Note: The witnesses must not be your executor, your executor's spouse or a beneficiary of your Will.

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