

STEAMSHIP



FRESHSPRING

MAGAZINE

**Preserving the
past to inspire
knowledge for
the future**

£4.00 WHERE SOLD



NO.39 SUMMER 2024



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.

Key Contacts

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

www.ssfreshspring.co.uk

www.facebook.com/SSFreshspringTrust

Membership Enquiries:

Please send an s.a.e. for a form to:
Steamship Freshspring Trust, c/o Little Cleave, Lower Cleave, Northam, Devon, EX39 2RH, or you can join online.

Volunteering on the ship:

If you would like to volunteer to help on the ship, please call Peter Gillett, our Ship Manager, on 01237 237 183. peter.gillett@ssfreshspring.co.uk

Registered Office:

Little Cleave, Lower Cleave, Northam, Devon, EX39 2RH



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FRONT COVER: As this issue was going to print, John Pook sent in this picture of *Freshburn*, which was based at Devonport 1945-74 and operated in Plymouth Sound where she was photographed in 1969.

From the Chair

I hope you are all having a good spring so far. We have certainly been busy with events on the ship, opening the ship and now we are into local shows and events.

Last weekend (the early May Bank Holiday weekend) was one our busiest with Northam Mayfair Saturday, Merton Vintage Show Sunday and Kingsley School fete on Monday. I did steam engine rides on all three days, which kept me very busy. I carried over 200 on Saturday, on Sunday it rained all day so a bit quieter and Monday was flat out again. I am pleased that I overhauled our engine over the winter as she will certainly earn her keep this year.

The ship has been doing well too with a much better start to the season than last year. We have our two new staff who are developing our audience and so this will have made a difference; also, we have decided to offer free admission for the time being to see how it works out. The returns are similar to charging but the numbers are much better, and Stewards are happy as they are more busy during the day. Children's activities also encourage more visits by families which is much welcomed. We have also been present with a stand at Morrisons and Asda supermarkets to promote the ship to local people and I am sure this is making an impression on awareness and the numbers on the ship. Our excellent ship model is quite a draw at supermarkets as, surprisingly, there are still local people who know nothing about *Freshspring*.

During this period, we have met with BMT, our Naval Architects to discuss strengthening our relationship with them and the next phase towards ship operation, and The Clean Energy Centre in Exeter to investigate future fuelling of the ship.

You will see that I have reviewed a book on BP Tankers in this issue; also there is an article about tankers by John Richardson, which is remarkably interesting. Tankers have been the biggest ships ever made with *Seawise Giant* being the biggest; after being lengthened by 265½ feet she was 1,504 feet in length. However, with a draft of over 80 feet, her operation was limited. She rarely made a profit for her owner. After several seasons of unemployment, in 1983 the ship was sold to South Korean breakers at only six years old. However, a reprieve came when she was chartered as a flotation storage and offloading unit. She lasted until 2003 when she was broken up at Gadani Beach as the last survivor of the ocean giants. The 1960s with the Suez canal closed were known as the golden years, a tanker could pay for itself in less than ten voyages.

We are very much looking forward to the *Waverley* visits in late May and mid June. This will be a real positive for Bideford as she has not been here since the 1980s. The *Freshspring* team plan to fly our bunting on the day and open the ship for viewing *Waverley* as she passes. I plan to escort her in and out in my steam launch. We might even get a compressor to sound the ship's siren.

While mentioning the steam launch, I was surprisingly awarded a trophy by The Steam Boat Association for steaming the furthest to a rally. You might recall I steamed from Lechlade to Henley-on-Thames with *Duet* for the Thames Traditional Boat Rally. I proudly received this trophy at the SBA AGM. I am planning to attend the Bristol Festival on 19th-21st July and Dartmouth Regatta on 28th-31st August this year and would be very pleased to see any members who are in the area. Look out for SL *Duet*.

Torrige District is one of 20 districts labelled for Levelling Up funding. The River Torridge Heritage Group has come together to put forward some plans for this £400m fund, which could bring £20m to our area. We are also working within the Arts Culture and Heritage group to acquire a church for use by the community. I am really pleased that so many groups have come together locally to collaborate with a view to improving opportunities and activities for our community. It's always been an aim of the Trust and it is really encouraging to see so many new faces at meetings.

You will see that Ros, our Administrator has been doing a lot of work on membership. Please read her report and comment if you wish. Or even volunteer to help.

Over the past months we have been working with Rio, a consultant group, to form a business plan for the Trust. This looks at options provided in both our Viability Study and our Feasibility Study to help us to plan forward and what skills we need within the Trustee and Volunteer team.

Do come and see us this year, maybe at an event or at the ship. If you have a few hours to spare, please consider volunteering, even from home. There is always a job to do and most are fun!

John

Membership Matters

As a volunteer led organisation, the commitment of members is vital to achieving the Trust's aims, so we need to ensure that you, our members, value and enjoy being part of the *Freshspring* family. It is also important that the *Freshspring* membership scheme operates as efficiently as possible for you and for the volunteer team who look after the scheme.

As you may be aware, we have been reviewing the membership scheme over the last few months. Some of the areas we have been considering are to understand -

- how we can operate the scheme in the most cost effective way
- how we can improve the process of renewal payments, for those of you who are not currently on an automatic renewal payment
- how we can communicate with you most effectively.

We decided to talk to some other ship and steam charities to find out how they operate their schemes and if we could learn anything from them. It was really helpful to engage with them and I wanted to share some of our findings that the Trustees will be considering in the coming months.

The first discovery is that all the charities we spoke to have introduced a digital magazine as they found that many of their members liked to receive it in that format. Importantly it also reduces the cost of printing and postage which enables more of the members' fees to go toward supporting the charity's work. Now, we know that many of our members love receiving and collecting the traditional hard copy magazine and we would not want to change that. However, we do need to consider the price increases we face, in printing and most significantly in the cost of postage. Therefore, we are considering introducing two levels of membership, a digital magazine membership and a premium membership which includes the hard copy magazines, with a modest additional cost. We would love to hear your thoughts on this; would you be happy to pay a little more each year to continue receiving the hard copy magazine?

The next comparison we made was the use of the charities' websites to join or renew membership. We found that fewer *Freshspring* members were joining or renewing membership online which is disappointing as joining via our website provides the Trust with all the personal and legal information required, it is easier to keep in contact with members and it creates an automatic annually renewing membership by credit, debit card or PayPal. Anyone paying for their membership by cheque or bank transfer, for example, will know how easy it is to forget to make that payment each year, which then means we

have to follow up by email or letter with a reminder, or two!

So, it would be helpful if you have any feedback on why you have not used our website to join/renew or if there is anything we can do to make the process easier for you to do so – do let us know.

We do know that we would love to communicate with you more regularly, in addition to the magazine, with news of what's going on aboard the ship with renovations, events and activities. Our website does have a 'Members only' area which is dedicated to this use but is currently underused. Our aim is to make this a space that you will want to visit regularly to keep up to date. We will keep you posted as it develops – and yet another reason to be an 'online member'.

I mentioned at the start of this piece that our membership scheme is run by volunteers. Since the sudden and sad death of our Membership Secretary, Richard Ker, I have been attempting to hold the fort and many of you will have heard from me in regard to renewals, but we would really value more support to develop and operate our membership scheme. If you think you could help – would you enjoy helping to put together news and updates for our members communications? Maybe you have some IT skills that you would like to put to good use or you have very few or no IT skills but are a people-person and would enjoy contacting and talking to members, then please do let me know.

We would love to hear from you if you have any comment about any of the potential proposals, about the membership scheme generally or if you would like to know more about joining the volunteer membership team, please do get in touch :ros.white@ssfreshspring.co.uk or by mail to Little Cleave, Lower Cleave, Northam, Devon, EX39 2RH

If you would like to renew your membership online, please go to our website www.ssfreshspring.co.uk and click on 'Membership Payment', at the top of the screen.

Ros White
Trust Administrator

Membership of the Trust is open to all and benefits include:

- Our informative magazine, printed in colour and delivered to your door
- Priority visits to the ship
- Member only events
- Early notification of events
- The opportunity at the AGM to have a say in how the charity operates
- To be part of Team Freshspring
- Exclusive access to SS Freshspring's Member's Area

Book Review

BP Shipping Pictorial

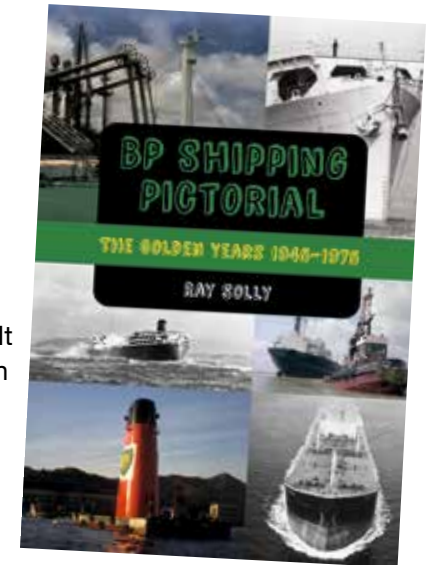
By Ray Solly

The Golden Years 1945-1975

This fascinating book with an abundance of pictures tracks the evolution of tankers from the first oil carrying sailing ship, *Elizabeth Watts*, which carried the first oil cargo in 1861, through to the ocean giants known as supertankers and their ultimate demise.

The focus is on BP shipping and its significant tanker evolution from 1917 through to the "golden" years of the 1970s. It includes company management, ship design changes, discharge systems and crew accommodation. It also features the clever but simple inert gas system (IGS) which saved many lives by introducing inert gas into tanks as oil was discharged.

The numerous photos and illustrations make this book an enjoyable and informative read, providing a level of detail that ensures the reader gains a full understanding of systems. A book that will remain a valued reference when required. **JP**



New members

We welcome the following new members of the Trust:

Mr Mark Kayser

Compton Dando, Somerset

Mr Chris Jewel

Bude, Cornwall

Mr Paul Lucas

Bideford, Devon

Education Update

With the sun finally putting in an appearance, a group of 60 children from the largest primary in Bideford visited the SS *Freshspring* this April. The children, aged between five and six, spent the morning on the ship learning about safety on board, rope making in Bideford, Morse Code signalling (with our wonderful Bill) and discovered some interesting writing around the ship when making wax rubbings of different plaques and labels in different areas.

Young children are always fascinated by the living quarters and of course love dressing up and finding our teddies, which seem to move around the ship of their own accord at times!

The children and teachers had a thoroughly enjoyable time and continued their enthusiasm once they got home, so much so, that some of them brought families to the ship at the weekend, very proud to be able to conduct a tour of their own and explore the engine room in greater detail than we could accommodate on a school visit. We are really pleased to be able to support schools with their enrichment activities, such a vital part of school life for the children.



School children waiting to board the ship.



The intricacies of Morse Code...

It will be interesting to find out the conclusion of the Year 1 investigation into the question 'Francis Drake – hero or pirate' when their topic comes to an end!

More photographs and comments from staff can be seen on our Facebook page, as the school kindly shared lots of photos from the day with us.

Our STEM kits are back with us now and are going out to another local primary school to be used in the second half of the summer term. This school is also based in Bideford and the children can easily walk down to the ship for a visit, combining it with the history of the wharves on the way.

We continue to support young people in alternative education. Six children from a school in Barnstaple are coming to the ship to gain some hands



How to do a rubbing...

on experience in engineering. Two of our volunteers, Richard and Mike, supported the children to remove a cylinder head using a block and tackle.

They have three more visits planned and will be turning the engine over and having a go at other engineering activities (yet to be organised) before the end of term. These visits are made much more interesting for the youngsters when we have volunteers present and their support with our education programme is invaluable. We really could not do it without you.

Sam Roberts



... and rubbing in progress.

Bideford and River Torridge Heritage Harbour

Mike Teare

In the last issue, I covered some of the background involved in getting heritage harbour status for Bideford and the River Torridge and also outlined some of things a heritage harbour should do.

Now, as a first update since our launch in January 2024, I can start to cover some of the things that heritage harbour is already achieving.

Launch and Media

We managed to get good coverage for the launch of heritage harbour in local papers (North Devon Journal and Gazette) as well as interviews on BBC Radio Devon, BBC Spotlight and an excellent coverage on ITV South West when despite a very cold wind, the weather was fine and the ITV drone got some superb pictures of the river.

In addition, our partner heritage groups in the River Torridge Heritage Group have been active with social media posts and with articles in the Rolle Canal newsletter, Waterways magazine, and the latest Sou'wester newsletter, both of which feature the Heritage Harbour and Rolle Canal. Since January, we have delivered presentations to over 300 people at talks to local community and special interest groups and there are more already planned.

The River Torridge Heritage Group continues to write a weekly column to the North Devon Journal and this will be added as a newsfeed on our website shortly. This column is the one previously written by the late Peter Christie and we are trying to reflect his style, which was so popular with readers, of a mix of history items and current affairs in Bideford and surroundings.

River Torridge Heritage Group

This group of heritage organisations from along the River Torridge now has twelve partners with the inclusion of Rosemoor RHS Gardens, Bideford 500 and RNLI Appledore.

The canal basin at the end of the Rolle Canal, the historical furthest extent of the waterway, is in Rosemoor Gardens. Currently not accessible to the public, this is where Rosemoor store their machinery. Over the last years, volunteers from the Rolle Canal Society have restored the leat to the River Torridge and the canal banks so that the basin once more contains water. They are now making safe the lime kiln and industrial buildings alongside the basin and it is intended in future that a public walkway will extend from the gardens alongside the canal basin. Not only that but the water stored in the basin is providing the gardens with irrigation and so reducing their need to use mains supply.

Bideford 500 has been involved with a long-term project to raise money and commission statues of bygone trades in Cooper Street and Ropewalk. They have plans for a further information panel on shipyards along the river. Some of the statues are pictured here.



A trio of sculptures in Cooper Street. Graham Hobbs



Bideford pottery mermaid. Graham Hobbs

Walk the Quays

This project started in 2023 after a discussion between Way of the Wharves and Tourist Information. Many visitors who come into Tourist Information in The Burton at Bideford ask what there is to do locally as they will be visiting the town for two or three hours. Working together, we have produced a self-guided walk map 'Walk the Quays'. This features a painting of *Freshspring*, by Lou Boulter, on the cover. The walk map takes visitors along the Quay with information about historic vessels and the port office. Then through the town pointing out buildings of interest, mostly with some sort of maritime connection. The walk takes about one hour, without any steep hills or steps - quite an achievement in Bideford. The map includes a brief introduction to heritage harbour and is now available free in Tourist Information and other outlets.

Waverley's Grand Return to Bideford Friday 31st May

The first heritage vessel to visit Bideford since heritage harbour was achieved will be the *Waverley* – the last seagoing paddle steamer in the world.

In a surprise announcement, *Waverley* will make her grand return to Bideford offering two sailings on Friday 31st May and Wednesday 19th June – this will be her first visit to the town since the 1980s.

Paul Brown, Harbour Master of the Port of Bideford, said "We are delighted to be welcoming Paddle Steamer *Waverley* back to Bideford for two port visits in May and June this year. Her visits will create an enormous amount of interest and we look forward to showing the beautiful river Torridge as well as our wonderful town to the passengers."

The Heritage Harbour will be welcoming *Waverley* to Bideford with *Freshspring* open from 1200-1400, so visitors can line the decks and enjoy the atmosphere and a great view. John Puddy, in his 1901 Thames steam



Pannier Pantry Customs House. Graham Hobbs

launch, *Duet*, will be accompanying *Waverley* up the river to her berth on The Quay, where we will be giving out a Bideford Heritage Harbour welcome pack at the bottom of the gangway. Let's just hope for good weather and some great pictures for next issue of the magazine. <https://barth.org/waverleys-grand-return-to-bideford/>



There's nothing quite like messing about on the river, unless it is steam boating. The annual 'Puffing-a-Wey' event is held in July based at the National Trust's Dapdune Wharf on the River Wey in Guildford in Surrey. Brian Gooding

A History of the Oil Tanker

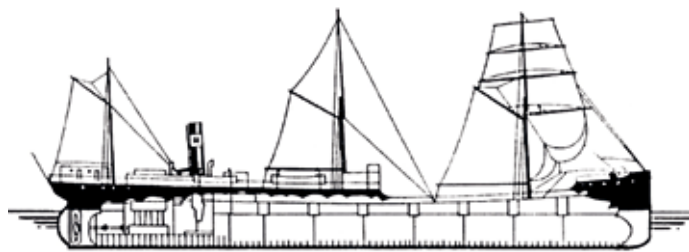
John Richardson

Liquid cargoes have been carried around on ships for a very long time. The Phoenicians were probably the first and were known to be trading all around the Mediterranean by 1000BC, using amphorae to carry wine, and olive oil. Amphorae, incidentally, were those rather peculiar earthenware vessels shaped like vases but with pointed ends. The reason for this design is somewhat puzzling although I suppose that if you were living in the desert, they could be stuck upright in the sand and be rather more stable than if they had a flat base. Anyway, they were used extensively by the Greeks and Romans as well as the Phoenicians and lasted a thousand or so years until someone invented wooden barrels.

The construction of wooden ships precludes using the hull itself as a tank, so barrels remained state of the art right up until iron ships were developed in the 19th century and even then, the early ships used separate tanks built into the hull rather than making the hull itself into a tank. One of these was *Zoroaster* built in Sweden 1878, which had a metal tank either side of the midships engine room and could carry about 240 tons of kerosene. Also constructed in 1878 was *Falls of Clyde* (actually built on the Clyde), an iron hulled four-masted sailing ship built for general cargo but converted to a tanker in 1907 by the addition of a boiler, pump room and ten steel tanks – capacity 19,000 barrels. Since 1963 she has been moored in Honolulu where she enjoyed many years as a tourist attraction. Currently, however, she is in very poor condition and despite attempts to raise the funds to bring her home to Scotland for restoration, the sad reality is that she will probably be scrapped.

In 1886 we finally get to a vessel where the hull itself was actually used to contain the oil, without separate tanks as used previously. This was *Glückauf*, 2,300grt, designed by Colonel Henry Swan and built by Armstrong Mitchell & Co. on the Tyne for

German owners. She had 14 tanks – seven each side of a longitudinal bulkhead. ‘Glückauf’, incidentally, is a greeting used in Germany to mean



The Glückauf from 1886.

‘Good Luck’ – the ship herself was not quite so lucky – she ran aground when leaving New York in 1893 and when they eventually managed to drag her off the rocks she sank!

The longitudinal bulkhead was Colonel Swan’s great contribution to ship design: it is easy to see that the liquid in any tank on a ship, unless filled right up to the lid, will always slop over from side to side as the ship rolls and if said tank is the full width of the ship, the resulting transfer of weight may increase the list quite considerably. If, however, you divide the tank longitudinal into two equal compartments, it can be shown mathematically (and I used to be able to do it once!) that the free surface effect, as it is known, will be reduced by 75%. A second longitudinal bulkhead, as used on virtually all later tankers, means that the free surface effect has become negligible and tankers are in fact some of the most stable ships sailing the seas. Free surface effect is what sank the *Herald of Free Enterprise* in Zeebrugge in 1987 at a cost of 193 lives. It was not the weight of the water flooding the vehicle deck that sank her but the fact that it all ran across to one side, as there was no central division to stop it.

By the 1890s, we can see what was to become the standard tanker layout, with two longitudinal bulkheads, a triple expansion engine down aft with the pump room immediately for’d of it and a midships accommodation block for the deck officers. A couple of the early ones were *Potomac*, 3,868grt, built on the Clyde in 1893 which lasted until 1929 when she was wrecked off the Bahamas and *Lackawanna*, 5,550dwt, also Clyde built in 1894 for Anglo American Oil. She went through several different owners, the last being Samengo & Mussinelli of Genoa who called her *Maya*. As she was now on the wrong side in WW2, she was torpedoed and sunk in the eastern Mediterranean by the British submarine HMS *Perseus* in 1941. All these early ships, although reliable and safe were not exactly speedy – around 12 knots

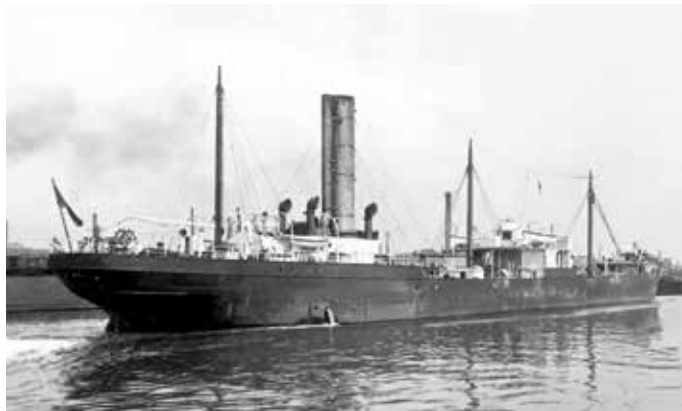


The Potomac, built on the Clyde in 1893.

being typical and they were thus easy prey for U-Boats in both world wars – hundreds were lost.

By the 1930s some motor ships were starting to appear, although the early diesels were not very reliable and the

ships no faster than their steam forebears. One such was MV *Athelknight*, 8,940grt, built on the Clyde in 1930. She was torpedoed on 26th May 1942, although she did not sink until the following day, when the attacking U-Boat finished her off by shellfire.



The *Lackawanna*, also built on the Clyde, this time in 1894.

There were 43 survivors from the 52 crew and just to show that U-Boat skippers weren't all as black as they have been painted, the captain of U172 stopped and passed over food and water to one of the lifeboats.

I can hardly fail to mention two very famous tankers of WW2: firstly, the *San Demetrio*, 8,073grt, built in 1938 on the Clyde. She was shelled and set on fire by the German pocket battleship *Admiral Scheer* on 5th November 1940. The captain ordered abandon ship, believing that the cargo of aviation fuel could explode at any time. Three lifeboats got away – two, containing the captain and 25 crew, were rescued and taken to Newfoundland. The other boat,

containing 16 men including the Chief Engineer and 2nd officer, after enduring two freezing nights in the boat, re-boarded her, put out the remaining fires and got her going again. All the charts and navigation instruments had been destroyed



The SS *Ohio* entering Grand Harbour, Malta.

by the fire but she managed to reach the Irish coast from whence she was escorted back to the Clyde, where I am happy to report that salvage money totalling £14,700 was paid out to the men who had brought her home.

The second of these two was the SS *Ohio*, built in 1940 in the USA. She was 9,625grt, 515ft long, and her steam turbine power gave her a speed of 16 knots. In 1942 she was part of operation Pedestal, a convoy designed to relieve Malta. She was torpedoed amidships on 12th August by an Italian submarine, as well as being continually bombed & strafed by the German air force until 15th August, when she finally arrived in Grand Harbour under tow – her cargo of aviation fuel pretty well saved the island from defeat.

The most well known tanker design from WW2 was the T2, over 500 of which were built at various American shipyards. They were 523ft long and 68ft beam with a dwt of 16,600 and had single screw turbo/electric drive, giving a speed of 15 knots.

The hulls were of welded construction, a technique that was in its infancy at this time and several of them actually broke in half due to brittle fracture, incorrect steel grades and poor welding – two of them, *Schenectady* and *Ponanganset*, while actually tied up alongside!

The T2 pretty well remained the benchmark in tanker size until the mid 1950s when a very rapid escalation began to take place, with tankers roughly doubling in capacity every few years. The examples quoted here are typical for the period and I make no claim that this or that ship was the actual biggest



The *Ponanganset* which split in two while in harbour.

of her time. Several are from Esso Tankers Ltd, simply because there is a very good website listing them all and also because I worked for them as an engineer officer for around five years. First up, in 1955, we have *Esso Exeter*, 26,742dwt, built by Vickers Armstrong on the Tyne. Second was *Esso Lincoln*,

51,707dwt, built in 1962 by NDSM Amsterdam. Third was *British Admiral*, 114,996dwt, built 1965 by Vickers at Barrow and launched with much fanfare by the Queen – she was quite short lived, however, being scrapped in 1976. Fourth was *Esso Northumbria*, 254,277dwt, built 1970 by Swan Hunter on the Tyne – at 1,143ft long, she was the longest ship ever to be built in England.

Lastly we come to the biggest ever: *Seawise Giant*, 564,763dwt, built 1979 by Sumitomo, Japan. She had a length of 1,504ft, a beam of 225ft and a fully loaded draft of 81ft, which made her too big to sail up the English Channel – this rather limited her commercial usefulness and she had several different owners who each renamed her – *Happy Giant*, *Jahre Viking* and *Knock Nevis*. During the Iran/Iraq war she was bombed and badly damaged but was later salvaged and returned to service. In 2004 she was converted to a floating oil storage and offloading unit near Qatar in the Persian Gulf and was finally scrapped in India in 2010.

All of these ships were steam turbine powered, for the simple reason that at the time they were built, there were no diesel engines available of the necessary power, thereby giving steam its last throw of the dice. Within a few years, however, 20,000 horse power diesels were commonly available and today you can have 100,000 if you want it and burn much less fuel into the bargain – good bye, steam!



British Admiral was built in Barrow on Furness in 1965.



Main deck of the Esso Northumbria.

As tankers increased in size, the bigger the mess they made when things went wrong. Here are a few of the notable disasters: first up was *Torrey Canyon*, 118,000dwt. Due to a navigational error she ran aground on the Seven Stones rocks between Cornwall & Scilly in 1967. She started to break up, leaking huge amounts of oil in the process which the RAF tried unsuccessfully to set fire to but she was finally sunk by bombing. In 1978 we had *Amoco Cadiz*, 234,000dwt. Her rudder had jammed following a manoeuvre to avoid another ship and despite valiant efforts to get her under tow, she ran aground on Portsall rocks, Brittany, eventually breaking into three pieces. She was finally sunk by depth charges. One of the biggest environmental disasters was caused by the *Exxon Valdez* of 214,900dwt. A navigational error led to her running aground in Prince William Sound, Alaska in 1989 and ripping open her



The Jahre Viking – formerly Seawise Giant.



Torrey Canyon on the rocks in 1967.

single skinned shell plating. Her master, Captain Hazelwood was reported to have been drunk and had left an uncertificated 3rd officer in charge. He was fined \$50,000 and made to do 1,000 hours community service – the clean up cost Exxon several billion. One result of this was that a new IMO (International Maritime Organisation) regulation came into force on 6th July 1993 stating that all new tankers over 5,000dwt had to

be double hulled. Existing vessels with single hulls had to be converted by 2005 or scrapped.

Apart from running aground, tank explosions were another hazard that started to become more frequent in large tankers: in one month in 1969, three tankers of over 200,000dwt exploded during tank cleaning operations. These were *Marpessa*, 206,720dwt and *Mactra*, 210,200dwt, which were both owned by Shell Tankers and also *Kong Haakon VII* of 222,500dwt – the latter surviving, despite having a 100 metre long hole blown in her main deck. The reason for these accidents was that the tanks had become so big that they could develop their own thunder clouds while being washed with high pressure water spray and generate enough static electricity to cause the fatal spark. SOLAS (Safety of Life at Sea) regulations were introduced in 1974 to make it a requirement for new build tankers to have an inert gas system, so that as the cargo was discharged, the tank was back filled with inert gas, obtained from the engine or boiler exhaust system. Existing ships took a long time to catch up – none of mine ever did.

Up to now all the ships I have described carried oil – either crude or refined but there are also a huge number of other liquids that are carried around on the sea, in specialist ships called product carriers or occasionally chemical tankers. So they can be easily recognised, the hulls of these ships are invariably painted a bright red or orange colour to warn other ships to keep clear. The cargoes can include vegetable oils, lubricating oils, animal fats, chemicals used in the plastics industry, solvents and even strong acids and alkalis – if it can be piped into a ship it can be carried. Naturally, you would not want to be loading any of these things into the usual rusty and filthy mild steel tanks used on normal tankers and the tanks have to be coated to prevent



The *Marpessa* sinking after an explosion on board.

contamination of the cargo – especially if it is a food product such as palm oil or coconut oil. The most common coatings are various types of epoxy resin and zinc silicate, while for the corrosive substances, stainless steel deck tanks are usually employed. Some products require to be heated to prevent them solidifying, so a certain number of tanks have steam heating coils.

Some cargoes are extremely toxic – acrylonitrile, which under certain conditions can give off hydrogen cyanide, being one such, and positive pressure breathing apparatus has to be worn by anyone working on deck when loading or discharging it. Strangely, however, the worst accident to happen on a chemical tanker occurred when the cargo was nothing more harmful than tallow. This was a ship called the *Anco Duke*, which suffered the most appalling tank cleaning accident, in which seven men died. Tallow, in itself is a harmless substance but it does have the property that it can absorb oxygen from the air. In this case the tank had been cleaned with boiling water, so that all the tallow residues had been washed off the sides and were now floating in about a foot or so of hot water at the bottom of the tank. The next part of the procedure was to allow a day or two for it all to cool down, by which time the tallow would have solidified into lumps floating on the surface, which could then be loaded into drums by crewmen working inside the tank. Apparently one man slipped and fell (probably overcome by lack of oxygen) and the remaining casualties, which included the Chief Officer, were the men who went down to rescue him. What none of them realised was that during the two days cooling down period, the floating tallow had oxidised and the atmosphere in the tank was therefore badly deficient in oxygen. If they had used an oxygen analyser and tested it before entering, the tank could have been ventilated first and seven lives would have been saved. Whether their testing equipment was faulty or whether they simply hadn't realised the danger, we shall never know but I still find it strange that after



***Kong Haakon VII* after an explosion which ripped a 100 metre hole in her deck.**

the first few men had gone in and failed to come out again, the remainder had not put on breathing apparatus.

Naturally, a great deal more attention has to be paid to tank washing, whenever a different product is to be



Post Charger, one of the ships the author worked on.

loaded into the same tank, with shoreside chemists occasionally coming aboard to check the cleanliness, and it also has to be established whether the new product is compatible with the particular tank coating. One of my ships was called *Post Charger* (later renamed *Anco Charger*) 25,300dwt which had 39 hull tanks and four deck tanks; this meant in theory you could carry 43 different products at the same time, although if that ever happened, I would imagine that the Chief Officer who was responsible for it all, might well suffer a nervous breakdown!



Another picture of the Jahre Viking – formerly the Seawise Giant.

Matt's Diary

I wrote my last diary entry for the *Freshspring Magazine* last year when I was on board *Navigator Pluto*. I ended up completing six months on board, my longest contract yet! It didn't feel like six months as the crew were great and completing six months allowed me to stay home long enough to attend two of my friends' weddings.

When my leave was up, my company informed me that I would be re-joining *Navigator Pluto* in Houston with the Chief Engineer that I had previously sailed with which was great news for me because he's an excellent Chief to work with. We joined the ship while it was at anchor, which is when I learnt that there was currently no 3rd Engineer on board to take over from as he had returned home early. This might have been a bit daunting as I did not receive any kind of handover, but as I had already sailed on board this ship previously, one wasn't really necessary! I then met all of the crew; some familiar faces were also back on board. The Electrician was Glaswegian, which I was happy about straight away because usually I am the only Brit on board.

Navigator Pluto is a challenging ship as it is 24 years old now. Unfortunately, previous managements have not maintained it very well. Last time I was on board the problems always seemed to occur just after crew changes so we developed a theory that the ship was crying when crew members were going home and new ones were joining. Proving the theory correct, my first day on board we had problems with the boiler level float switches. This is dangerous because if the float does not work, then the boiler feed water pumps will not start/stop correctly. We spent a lot of time trying to fix this and scoured the



The Pirate party.

ship for spares, which we eventually found. This was very lucky because had we not been able to fix the problem, we would have had to take watches and manually start and stop the feed water pump.

The first two months of my contract were very relaxed. We loaded cargo in Houston and were heading to China to discharge. The Captain on board at the time was great for the crew because he always arranged on board events. On one occasion, he gave the crew the day off and told everyone to put together a pirate costume for a party. We then all gathered in the mess in our costumes. The captain had asked the chief cook to put on a buffet and we played a few party games. It was great for morale and I was voted second best costume!

After discharging cargo in China, we headed for Changxing Island for scheduled dry dock to allow maintenance that cannot be completed while the ship is in the water. I was surprised to see that the dry dock we were going to use was a floating dry dock; I did not actually know that there was such a thing! It was a very hectic month as there was a long list of jobs to be completed and a strict deadline which needed to be met. To make it more difficult, most of the yard workers only spoke Chinese! I became the head translator as I downloaded the entire language to my phone on Google Translate so I was able to use my phone to communicate with them without internet.



Matt next to the propeller in the dry dock.



Matt in Shanghai at night.

The company was kind enough to arrange a day trip for the entire crew to Shanghai. We visited the Old Town, Yu Gardens and stayed long enough to see the skyline at night with the lights on. This was definitely my best shore leave yet!

Upon completion of dry dock, the ship went out for sea trials. During the testing of the engine, we discovered that the governor was not responding. Unfortunately, we needed to order spare parts before any repairs could be undertaken. However, on the company's orders we had to sail to the next port by operating the engine in local control. We manned the engine room 24 hours a day each taking a turn on watch. Eventually we managed to reach Malaysia where we received the spare parts we needed and the problem was rectified.

By this time, three months had passed and my contract was complete. This was great timing as I was able to attend a prep course for my 2nd Engineer written exams which I completed in March. I have recently received my results and I was relieved to learn that I had passed! I just need to pass an oral exam on my next leave before I get my 2nd Engineer ticket. I am now waiting for *Navigator Pluto* to reach Houston where I will be joining as 3rd Engineer once again!



This Ford E83W Thames van in British Waterways' livery was seen a few years ago at its home depot at Fradley Junction where the Coventry Canal goes off from the Trent & Mersey Canal, a few miles north of Lichfield in Staffordshire. *Brian Gooding*

Steam on the Tidal Thames

John Green

In 1965 I was apprenticed as a Lighterman and Waterman (bound to my father, also a Lighterman) at Watermans' Hall in the City of London, an ancient livery company that still issues the licences today. At the time, steam power, although in decline, was still common. The colliers which serviced the power stations along the river were mostly steam and I recall watching them moor alongside the jetty at Blackwall Point power station (now, amazingly the site of the O2 arena), their clattering winches pulling the ropes tight, accompanied by clouds of steam.

After the first two years of my apprenticeship, which were spent working as deck boy on a river tug, I was permitted to be in charge of a lighter without



Lighters moored on Bow Creek in the 1950s. *Reg Batten*

supervision. The company I was with had an equal number of both canal and river barges and serviced wharves and docks from Sheerness to Isleworth on the Thames and along the canal system, including the River Lee, the Regent's canal and the Grand Union. All the creeks were well served by barge, from Dartford and Crayford, past Barking, Bow, Deptford and Wandsworth Creek and up river as far as Isleworth.

One of the wharves in Barking Creek was unusual in that the crane for unloading the cargo was steam driven. When I arrived at the wharf (I recall it was called Maple Wharf) to prepare the barge for the dockers to discharge, I'd not be the first to arrive, as was normally the case in the morning. No – the first on the scene was the crane driver, getting the pressure up in the boiler, and there was always a good chance of a cup of tea on cold winter mornings! It's remarkable how I can recollect the experience after almost sixty years.

There was so much cargo carried by lighter in the 60s that the enclosed docks were full of craft both loaded and empty. Undocking was done with tug assistance and the PLA still used some steam tugs. I remember being towed behind the *ST Brent* out of S.W. India Dock. With motor tugs, the engine noise



Unloading sand or similar material from lighters with grab fitted mobile cranes on the River Lea, 1950s. *Reg Batten*

would indicate whether the tug was going ahead or astern but with steam tugs it was necessary to keep an eye on the wash coming from the propeller. Incidentally, these were the days before synthetic ropes appeared and the tow ropes were very thick sisal, which was very heavy when wet and how the water squeezed out of them when the tug took the weight of the tow!



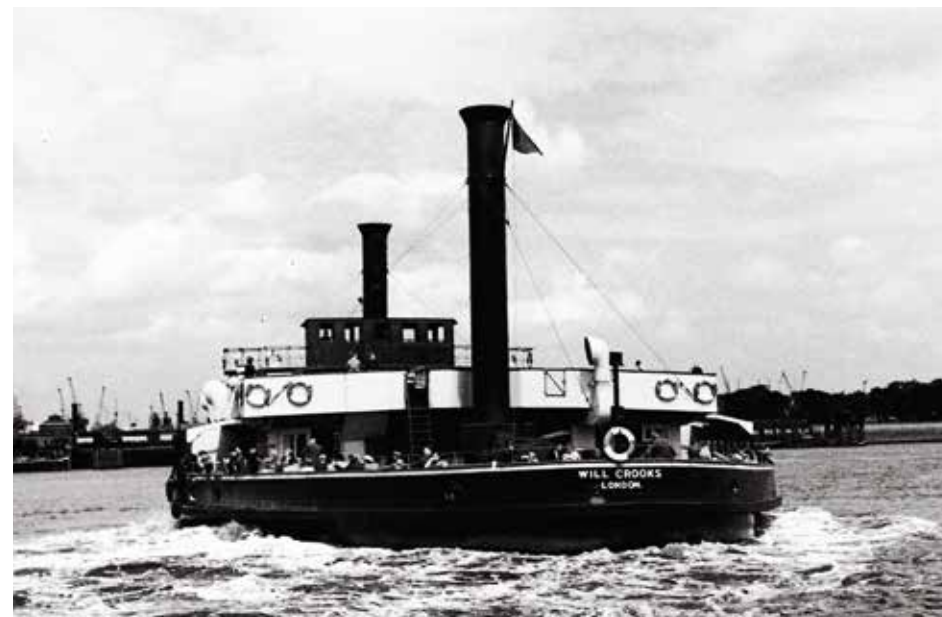
SS Cliffe Quay, built 1950, was the last coal-fired steam collier owned by the Central Electricity Generating Board. Seen near Beckton in July 1977. Reg Batten



A typical 'flatiron', the Tarring (1958, 1,877grt) seen in Gallions Reach in 1977. Owned then by Stephenson Clarke, she had been the South Eastern Gas Board's Lambeth until 1970. Reg Batten

As a boy living in Poplar, during the school holidays, I would sometimes walk to Woolwich Ferry (the ferries then were the *Will Crooks* and *John Benn*, if I remember rightly) with a school friend to spend the afternoon on board. It was always warm near the boiler and a wonderful site for a young boy, the engines turning the individual paddle wheels. The manoeuvrability of those ferries was astonishing but they must have cost a fortune to run. The river at the time was heavily polluted and as the paddles turned they produced huge quantities of white foam which blew across the dank water. Returning from the ferry we'd catch a train (steam, of course) from North Woolwich to Canning Town.

I remember on one occasion I was working at a wharf in the Upper Pool between London Bridge and Tower Bridge when I saw a PLA wreck lighter making her way down river on the ebb. She had no propulsion, her only power being the steam winch on the foredeck. This was used to raise and lower the anchor from the river bed as necessary to provide enough 'bite' to enable the rudder to act and thus steer the vessel through the bridges. It was called drudging I believe; a common occurrence which, in the hands of a competent skipper, was perfectly safe. I couldn't imagine it being done, or allowed, today.



Woolwich ferry Will Crooks (1930, 621grt). There were four of these steam paddle ferries which were replaced in 1963: Squires and Gordon built at Cowes in 1922-3, John Benn and Will Crooks in 1930. They ran on coke produced at Beckton gas works. They could carry 1,000 passengers and 100 tons of vehicles. Reg Batten

Equally skilful was the navigation of 'flat irons', Newcastle Colliers to the up river power stations and gas works. Limited by bridge clearance and draught, precise calculations were needed to determine when to make the move up river and when to leave the wharf when empty.

Another example of steam power was at Empire Paper Mills at Gravesend. My company delivered barges of wood pulp from Scandinavia in bales to the jetty where they were discharged into railway wagons. The mill operated a couple of steam locos to pull the loaded wagons from the jetty into the works and to avoid the danger of sparks from an engine causing a fire, the locos were filled with steam under pressure from the mill boiler.

It all seemed perfectly normal to a young man in the Sixties but now is but a distant memory.

The Editor would like to thank Malcolm Batten for supplying the accompanying photographs taken by his late father Reg Batten. For more like these, an excellent book 'Shipping on the Thames & the Port of London during the 1940s-1980s', available from Pen & Sword Books. ISBN 978 1 39901 840 1.



Steam tug Brent was built in 1945 by William Pickersgill, Sunderland for the Ministry of War Transport as TID159, one of 182 TID class tugs. Sold to the Port of London Authority in 1946 and renamed Brent. Withdrawn in 1969. Now owned by the Steam Tug Brent Trust and kept at Maldon in Essex. Malcolm Batten

Leaving a legacy to the SS Freshspring Trust

The Steamship Freshspring Trust has benefitted greatly from the generosity of its members and friends who have left or given money to the Trust. Legacies provide very necessary financial support in helping the Trust 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 Trust 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 Trust 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

Second Witness

Signature

Signature

.....
 Full name

.....
 Full name

.....
 Address

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 Address

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 Occupation

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 Occupation

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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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