

HISTORY OF THE LIBERTY SHIP **SS. JEREMIAH O'BRIEN.**

This article is taken from the lecture notes of Engineer David Aris

INTRODUCTION.

Of the 2710 Liberty ships constructed in the USA during WW2 there are only two remaining today, SS. Jeremiah O'Brien, in San Francisco, and SS. John W. Brown in Baltimore.

In 1994 the O'Brien steamed from her home port to Europe for the commemoration of the 50th anniversary of D day, 1944 (where she had been on D Day +3 in 1944).

I was invited to be an engineroom watchkeeper for the return voyage from Le Havre to San Francisco and was 65 years of age at that time with a 38 year gap in my Seaman's Discharge Book. I was perhaps the most overqualified fireman that ship had ever had!

In my youth I had served an apprenticeship at the North Eastern Marine Engineering Co's works in my home town of Sunderland where we built the same type of engine as was fitted in the Liberty ship.

Visitors to the ship in San Francisco are given an explanatory leaflet which states "The Liberty hull was a modification of an earlier British hull" – no more than that. One of my aims has been to demonstrate to my American shipmates that there was a huge British input to the Liberty ship programme and it was certainly not an all American effort which is the usual picture portrayed.



Jeremiah O'Brien at Spithead for the D Day Anniversary in June 1994. Photo by the Editor who had the pleasure of piloting the vessel out to sea. See Cachalot 12.

THE OCEAN SHIPS.

WW2 commenced for the British in September 1939 at which time the UK imported some 55 million tons of food and materials per annum. It had the largest merchant fleet in the world, some 3000 ocean going vessels plus some 1000 coastal vessels the total capacity of which was about 21 million tons. Manpower was around 160,000 men.

By August 1940, the first year of the war 385 ships of capacity 1.7 million tons had been lost mainly to German U boats. 1942 saw about 300 U boats operating in the Atlantic and the UK and her Allies were losing ships at the rate of 2 million tons capacity per annum which was about 5 times the total replacement rate of all UC merchant building shipyards. During the whole war the UK lost 2284 ships (57%) and 31,908 merchant seamen (20%) which is a higher percentage figure than any of the 3 armed forces.

From 1939 –1945 268 million tons of supplies were imported into the UK.

These are very big figures.

Winston Churchill was First Lord of the Admiralty at the outbreak of War becoming Prime Minister in May 1940. Hence had a particular interest in things nautical (he had been First Lord on a previous occasion in his career, during WW1.) and he quickly realised that this country would fall to the enemy if we could not supply our needs by sea and so he set up the British Shipbuilding Mission to the USA this small group sailing to New York on the Cunarder Scythia in September 1940. The leader of the Mission was Mr. Cyril Thompson, joint Managing Director of the J.L. Thompson shipyard in Sunderland and at that time a mere 33 years of age. With Thompson went Mr. Harry Hunter, Technical Director of the North Eastern Marine Eng. Co. of Wallsend on Tyne, aged 49. Thompson and

Hunter had worked together for many years as NEM engines were usually fitted into JLT ships. In New York two more people were added to the Mission, Mr. Bill Bennett, Principal Lloyds register Surveyor and Mr. Stuart Heck, Principal Engineer Surveyor to Lloyds, both from the NY office. Mr. R.R. Powell completed the team he representing the British Admiralty.

The Thompson shipyard had not built any ships between 1930–35 due to the depression but wisely kept their design and drawing offices busy constantly updating designs for better performance and economy against the time when an order would come in. This happened in 1935 when Halls of Newcastle built SS Embassy, a 9100 TDW tramp steamer which could achieve 10 knots on 17 tons of coal per day. She cost £95,000 and was sunk in 1941.

In 1938 the Court Line of London built SS Dorrington Court, a slightly larger version of the earlier ship at 10,800 tons DW she being sunk in 1942.

The Thompson /Hunter team took with them to the USA drawings of hull and machinery of a modified version of Dorrington Court as a sample of what they were hoping to purchase as this design had impressed the Admiralty achieving 11 knots on 17 tons of coal per day using a 2500 HP triple expansion steam engine.

The principal terms of reference of the Mission were to purchase some 60 10,000 TDW cargo ships per year. Unfortunately it was very soon discovered after their arrival in New York on 3 October that such ships were not available at which stage the team were instructed to arrange the BUILDING of 60 ships per annum. They then set out on a tour of all the main shipyards in the US and Canada and so far as the US was concerned no yards were available to build, either being still inoperative due to depression, or engaged in building for the US navy.

The Mission was then instructed to BUILT TWO SHIPYARDS, each to produce 30 ships as soon as possible. Contracts were signed on 20 December 1940 to this end. No time was being wasted.

The Todd/Bath Iron Works yard was then constructed on vacant land at Portland, Maine, across the river from the city, this to be known as the east yard. Because of the geology of the terrain conventional slipways were not used but a massive drydock was excavated which could hold seven vessels under construction at one time, this divided 2/2/3. When 2 (or 3) ships were ready the docks were flooded, the gates lifted and the ships floated to a nearby fitting out berth. The director of this yard was William Newall. (Some time later this company built a second yard, the west yard, this having seven conventional slipways. The SS. Jeremiah O'Brien was built on slip no., 1.) Between contract date of Dec. 1940 and November 1942, some 23 months, this yard was built and delivered its 30 ships.

The second yard, Todd California, which was the first yard to be operated by Henry Kaiser, was built on reclaimed land at Richmond, California, on the east shore of San Francisco Bay; here seven parallel conventional slipways were used for construction of the ships. This yard was built, and its 30 vessels delivered in a mere 19 months from contract.

When originally planned, it was estimated that the cost, to the UK Government, of building the two yards would be \$9 million and the ships would cost some \$87 million (\$1.45 million per ship), making a total of \$96 million. In the event the yard construction costs came out at \$17 million taking the total to \$104 million. On the completion of the 60 ships the UK Government sold the two yards to the US Maritime Commission and they went on to construct 236 and 138 Liberty class vessels respectively.

There were some differences in these 60 ships from the prototype which would have been built in Sunderland; there was much more shell and other welding although rivets were still used for all shell/frame connections. It was difficult in the US to source a supplier of the traditional British Scotch type fire tube boiler as US practice had moved on towards water-tube boilers but eventually railway engineers provided the answer with the American Locomotive Company built 90 boilers for the east coast vessels whilst two companies, one

in Seattle, the other in Los Angeles, built 90 for the west coast ships. The Mission also ordered, initially, 26 ships to the same design, this in Canada and these were virtually identical to a Sunderland ship being fully riveted and named the North Sands Class after the Sunderland shipyard. Canada went on to build a total of 353 ships of the class, some prefixed Park and others Fort due to minor differences mainly in the method of firing the boilers and the fuel used. (coal or oil).

After overseeing the building of the two shipyards and giving advice on the ship construction, Cyril Thompson returned to the UK in a Prince line vessel, Western Prince, which was torpedoed mid Atlantic this resulting in Thompson spending several days in a lifeboat (with all his official papers to be delivered to the Admiralty) before being rescued. Unusually he did not immediately return to his shipyard but attempted to join the Royal navy but was rejected so joined the RAF as a Flight engineer in Bomber Command before returning to Sunderland at the end of the war. Hunter remained in the US some further time helping organise the building of the main engines, the NEM triple expansion unit.

Thompson was awarded the CBE and Hunter the OBE for their efforts in this project, awards which, considering their vital responsibility in a project which could have lost Britain the war had they not succeeded, should have been much higher. (See later, Winston Churchill).

In 1942, Thompson and Hunter presented a technical paper to the now defunct north east Coast Institution of Engineers and Shipbuilders in Newcastle, entitled "The British Ship-building Programme in the USA, 1940-42." This paper gives great details of the whole project and the original is now lodged in the archives of Newcastle University. I have had copies placed in the archives of the two remaining Liberty ships, in San Francisco and Baltimore.

All vessels built in the UK to Government order during WW2 were prefixed "Empire" regardless of size or type but for the 60 US built ships they chose the prefix "OCEAN" as it was thought that "Empire" would offend Americans! "Atlantic" was considered as a prefix but also rejected as half the ships were built on the Pacific seaboard and half on the Atlantic. Hence the emergence of the OCEAN class from which we shall see, the LIBERTY ship was developed.

LIBERTY BUILDING PROGRAMME.

In 1936 a US government agency, the US Maritime Commission (USMC) was set up to oversee the development of the American Merchant fleet.

In 1941, whilst the Ocean ships were under construction, President Roosevelt wished to expand this fleet which he considered too small and too old. The USMC and American shipowners required a faster and larger ship than the Ocean design but US shipbuilders and the very respected New York naval architects, Gibbs and Cox testified that the British design was well founded and had much to recommend it, pointing out that with the looming possibility of war, time was running out for a fresh design to be developed. (William Gibbs, after WW2, went on to design the Blue Ribband winning passenger ship SS United States.)

Gibbs and Cox were very familiar with the Thompson design having redrawn some of the original drawings to suit US building practices and they were allocated the task of modifying to Ocean design to become the Liberty design; but there were several major modifications –

Two Water tube boilers were fitted in exchange for the three Scotch boilers of the Oceans. It is interesting that the two major boilermakers in the US at that time, Babcock and Wilcox and Foster Wheeler both had suitable designs but the USMC wished for total standardisation and persuaded B & W to allow F.W. to build their boilers under licence for the duration of the war. (The Jeremiah O'Brien then, has B & W design boilers manufactured by F.W.)

There was much more use of welding of shell plating and all superstructures although in most cases rivets were retained in shell/frame connections. Welding was used on 75-95% of all joints. Contrary to popular opinion only 353 fully welded ships were built these from the delta yard in New Orleans and the Jones yards in Georgia and Florida, these three being new yards and allocated the building of some specials such as Liberty tankers and Liberty colliers.

At that time the standard UK built Empire ship would use 480,000 rivets whereas a Portland sourced ship would only use some 23,000 rivets. The well established Bethlehem yard was somewhere in

between using 114,000 rivets on frame connections and on plate seams the butts being welded. Post war the Bethlehem ships were the most favoured for purchase by knowing British shipowners.

In the Ocean class, there were two hatches forward of the bridge structure, no. 3 hatch was between the bridge and the engine/boiler casing the latter also including engineer's accommodation, with two hatches aft of the engine/boiler casing. The American design was to move the bridge aft and join it to the engine/boiler casing thus forming one unit accommodation block for all crew members. This was considered more "democratic", safer in bad weather and wartime conditions, and cheaper to build.

Spray painting, as opposed to brush application, was widely used.

So far as organisation was concerned it was common to work 24/24 on three shifts; 3 yards had full scale mock-ups of engine room piping and ten sets of pipe systems were produced at a time.

Gibbs and Cox gave all the yards backup providing drawings and models using a staff of about 2300.

In December 1941, as a result of the attack on Pearl harbour, the US entered the war against Germany and Japan and the Liberty building programme was greatly expanded in both existing shipyards and new shipyards built on "green field" sites. The 18 yards had a total of 210 building berths plus of course associated assembly buildings. There were 20 manufacturers of the main engine, two in particular taking the lion's share, Joshua Hendy of Sunnysvale and Hamilton, Ohio both building 28% each. Hendy were eventually producing one engine per day and their final total was 754 engines in 2 1/2 years at a cost of about \$106,000 per engine. In some cases, engines were exchanged between builders in Canada and the US.

Henry Kaiser operated many of the yards and usually gets the credit for building most Liberty ships but the single yard which built the most ships was Bethlehem Fairfield of Baltimore whose output was 384 Liberty's plus many other types. Kaiser was not a shipbuilder but a very skilful organiser of men and materials who thought big. He started life as a photographer in New York, moved into the concrete business and eventually built large civil projects such as the Boulder and Hoover dams and the Bay Bridge linking San Francisco with Oakland. A sip to him was merely another product to be made; after the war he built motorcars and organised a very large life insurance company.

The Chairman of USMC took a drawing of the Liberty to President who described it as adequate but an "ugly duckling". Land recognised this name would not be a morale booster to the thousands of people building the ships so coined the name "Liberty" and 27 December 1941 was designated Liberty Day on which 14 identical ships were launched.

The first Liberty ship to be built, SS. Patrick Henry, was completed by the Bethlehem yard in 245 days but by the time the 20th ship was built this time had come down to 120 days and by the 50th ship, only 58 days. The learning curve was working!

The average of ALL yards was about 62 days and this depended upon crange, weather conditions, skills and availability of the workforce and in some cases, availability of steel from the mills. It has been estimated that a Liberty comprises of some 250,000 components but there were only about 100 crane lifts on the berth as a result of well organised prefabrication. The Kaiser yard at Vancouver (Washington State, not Canada), had a sheer legs crane which could lift an entire 250 ton deckhouse as a unit.

Kaiser organised a record attempt (possibly to demoralise the enemy!) and this took place at the Kaiser yard in Richmond where the SS Robert Peary was completed, keel laying to launch in 4 days, 15 1/2 hours with a further 3 days afloat for final fitting out.

The schedule was....

- Day 1. 1450 tons of steel laid down and main engine installed on tanktop.
- Day 2. Built to upper deck.
- Day 3. Deckhouses, masts and deck machinery installed.
- Day 4. Wiring and painting mainly completed.

There is a story which persists whereby Kaiser invited a lady sponsor to the launching platform and handed her the champagne bottle; the lady looked down the berth and remarked to Kaiser, "There is no ship there". Kaiser replied, "lady, don't worry, just start swinging...."

But there is another side to these wonderful production results and I quote the Editorial from the local newspaper the Baltimore News of 13 November 1942 as follows....

"AND YET, FOR ALL THIS DAZZLING SPEED IN TURNING OUT INDIVIDUAL SHIPS FASTER THAN SHIPS HAVE EVER BEEN BUILT BEFORE, AMERICA MUST FACE THE FACT THAT THE OUTPUT PER WORKER IN OUR SHIPYARDS, IN TONS OF STEEL, IS ONLY ABOUT HALF THE OUTPUT PER MAN IN BRITISH SHIPYARDS. THAT IS A CHASTENING THOUGHT!

CRAMPED AS THEY ARE FOR SPACE, HAMPERED BY A RIGIDLY ENFORCED BLACKOUT, HARASSED AT INTERVALS BY GERMAN BOMBERS, MANNED BY WORKERS WHOSE DIET IS INFERIOR TO THAT OF AMERICAN WORKERS, NEVERTHELESS BRITAIN'S SHIPYARDS ARE OUT-PRODUCING US, MAN FOR MAN, BY ABOUT TWO TO ONE.

IT IS A FINE THING TO STARTLE THE WORLD BY PRODUCING A SHIP IN LESS THAN FIVE DAYS BUT IT SEEMS OBVIOUS THAT OUR SHIPYARDS WILL HAVE TO STEP UP GENERAL PRODUCTION A LONG WAY. WHILST CHEERING LUSTILY FOR SPEED RECORDS WE MUST ALSO ASK WHY THE BRITISH, MAN FOR MAN ARE OUT-PRODUCING US."

In shipbuilding it is generally accepted that steelwork output is a good measure of the progress of a ship, other trades, carpenters, fitters, electricians, etc. following up at the same rate.

The building man-hours for steelwork at J.L.Thompson's in Sunderland ((Empire ship), 336,000.

The building man-hours for steelwork at Bethlehem, Baltimore, (Liberty), 510,000.

Hence, Bethlehem required 52% more hours than Thompson.

At the outbreak of war, there were 12 million unemployed in the US and a mere 20,000 workers in the shipbuilding industry. So there was no shortage of labour and at the wartime peak there were 650,000 in the industry in some cases, 50% being female. The Portland yard for example, employed 30,000 of which 10% were female and 85% were from non traditional shipbuilding backgrounds. With ample labour and the developed concept of prefabrication speed records for ship production were achieved.

There is little evidence of trade demarcation and there were few inhibitions about new practices and economy was a watchword so far as materials were concerned. (Though not apparently where labour figures were concerned.) The Marin shipyard at Sausalito in the early days scoured redundant railway systems to obtain unused railway bridges which were dismantled and recycled into ship components. Very early Liberty ships occasionally went to sea with wooden cargo booms until steel tube supplies caught up and some ships went to sea with only 1 ½ sets of anchor cable lengths in the name of economy.

After the war ended, General Eisenhower, the supreme Allied Commander, made a speech in which he listed items of equipment without which he doubted the war could have been won. He included the Jeep, the Dakota aircraft, the Sherman tank and the Liberty ship. The USA was the arsenal for the supply of essential equipment and much food and if these could not be shipped across the sea they were useless.

Prime Minister Winston Churchill had an opinion on merchant shipping -

In his letter to Roosevelt on 8 December 1940 when things were not looking good he stated...

"THE MORTAL DANGER TO OUR COUNTRY IS THE STEADY AND INCREASING DIMINUATION OF OUR SEA TONNAGE. WE CAN ENDURE THE SHATTERING OF OUR DWELLINGS AND THE SLAUGHTER OF OUR

CIVILIAN POPULATION BY AIR ATTACKS, BUT THE DECISION FOR 1941 LIES UPON THE SEA.

UNLESS WE CAN ESTABLISH OUR ABILITY TO FEED THIS ISLAND, TO IMPORT THE MUNITIONS OF ALL KINDS THAT WE NEED, WE MAY FALL BY THE WAY.

IT IS THEREFOR IN SHIPPING AND THE POWER TO TRANSPORT ACROSS THE OCEANS, PARTICULARLY THE ATLANTIC OCEAN, THAT IN 1941, THE WHOLE CRUNCH OF THE WAR WILL BE FOUND".

In 1949, Churchill in his book, "The History of the Second World War" states that the above quoted letter was one of the most important he ever wrote.

(This is of course, why I feel that Thompson and Hunter should have received higher honours.)

All Liberty ships were built to American Bureau of Shipping Classification. (ABS) The original deadweight tonnage as designed was 10,428 but ABS were so impressed with the general design and scantlings of the ship that they considered that it could have an increased DW of 10,865 without modification (i.e. deeper loading to load line), hence a gain of 437 tons per ship. Of the 2710 Liberty ships built in 4 years, 2580 were standard basic dry cargo vessels and hence the total gain of this increased tonnage was 1,184,000 tons equivalent in theory to 113 more ships!

Whilst retaining the standard hull form and main machinery some vessels were fitted out for special purposes such as hospital ships, animal transport, repair workshops and distilling ships for the navy, troop ships (which doubled up as POW ships), tank transports which had heavier tanktop plating, boxed aircraft carriers which had enlarged hatch openings, colliers which had the engineroom located aft, and tankers which looked like cargo vessels complete with hatch coamings and cargo gear, but had oil-tight bulkheads and tank divisions built in.

PROBLEMS.

The USMC built over 5000 merchant ships of all types during the war, the majority being mainly welded and so far as the Liberties were concerned only six were total losses due to structural failure and only two of these caused loss of life but all six were in ballast condition at the time of failure. The majority gave good service though many had cracks of a more minor nature.

There were several reasons for these failures, -

Poor workmanship due to an inexperienced workforce and tight schedules. In a very few cases, deliberate sabotage; welding rods were placed in grooves and welded over to simulate faster welding rates. Such rare cases were severely dealt with by prison sentences.

Design faults which emerged due to the conversion of a riveted hull design to one to be extensively welded, examples being right angled hatch corners where a radius should have been introduced, and discontinuity where a recess was created to facilitate inboard stowage of the accommodation ladder.

A major cause of failure was low temperature brittle failure of steel this being observed when ships built at Portland, Oregon, where the winter temperature can drop to -20F, were allocated to the Soviet Union and sent to Vladivostok. And operated in low temperatures.

The USDMC requested Admiralty support in solving this problem and Ms. Constance Tipper, a metallurgist researcher at Cambridge University was allocated this task. Ms. Tipper developed a test which related falling temperatures to the brittleness of steels and this test, the Tipper test, is still used in research. The solution was to advise a modified steel formula for the mills so as to supply more malleable steel. After retiring from academic life Ms. Tipper retired to Cumbria and was for some years a metallurgic consultant to the Vickers shipyard at Barrow in Furness during the construction of the nuclear submarines. She died in 1995.

Post war there were 54 propeller losses due to fractured tailshafts and this was caused by bad workmanship resulting in salt water ingress to the shaft cone and stress corrosion. Three of these casualties became total losses.

The original design was for a vessel to operate in the trampship market, i.e take a cargo from A to B, then another from B to C, then another.... Minimising ballast passages which were loss making. To this end the ballast tank capacity totals only 2824 tons. During the war, of course, the

majority of cargoes were westbound from the US to Europe and Russia and ships had to return across the Atlantic in ballast which made for discomfort for the crew due to heavy rolling, possible instability and extra stresses on the hull. It was decided that solid ballast would be loaded in the UK and in the case of Bristol (and possibly Liverpool) departing vessels this comprised of bomb damage rubble from houses and other buildings. This ballast was discharged in New York on the banks of the east River at Manhattan and today forms the foundations of the East River Drive in New York.

POST WAR.

Despite the war losses of 200 Liberty ships, 50 on the Murmansk convoys, the US emerged from the war with a merchant fleet of 4.1 million tons compared with a pre war figure of 8.7 million. This was greater than the rest of the world total and the Liberty formed some 50% of all world dry cargo vessels and hence had a huge commercial effect. The predicted life was 5 years (it is not possible to build a ship to last a mere 5 years) but some Greek owned vessels worked until 1986, a 40 year life.

The Lend Lease policy of the US allocated many ships to other countries...

UK	125
Greece	100
France	75
China	18
Norway	24
Soviet Union	50
and even Italy	100

US shipowners, after some time, realised that UK owners could operate their ships more economically than themselves and lobbied their government to have these ships returned to the USA. The UK Government opposed this suggestion as unfair and it did not take place but the British shipowners had to purchase the ships at about £140,000 each. Some of the Soviet operated ships were never returned and never paid for!

Despite the distribution of these ships there were still hundreds remaining in "Mothball Fleets", up the James River in Chesapeake Bay and in Suisan Bay, up the Sacramento River from San Francisco Bay and other sites. These were slowly sold off or scrapped as by the 1960's 4th and 5th surveys were required and more efficient ships were being built and by 1970 only some 300 remained. By 1979 there were less than six and today there remain only two.

(It is a measure of the wealth of the US that 41 ships were de-oiled and sunk off the Florida coast to form a fish breeding reef.)

CLASSES USING THIS HULL AND MACHINERY DESIGN.

Oceans	60
Liberties.	2710
Canadian built Forts and Parks.	353

(This class was subdivided in to North Sands, which had coal fired Scotch boilers, Canadian class, which had Scotch boilers oil/coal fired, and Victory class which had W/T boilers oil fired.)

Empire ships built in UK at Thompsons 24

(Whilst other shipyards in the UK were building similar cargo ships which would be classified as Empires, the designs were not standardised hence only the Thompson Empires were using the identical hull form.)

Hence this hull form and main engine type was used for a total of **3147** ships.

An all time record never to be broken for deep sea vessels.

SS JEREMIAH O'BRIEN. (JOB)

This ship was built on No.1. slipway in the west Portland, Maine, shipyard of the New England Shipbuilding Corporation. (Sometimes known as the Bath/Iron Works)

Keel laid 6 May 1943.

Launched 19 June 43, delivered 30 June 43, hence 54 days building.

Voyage 1 was from Boston to the UK.

Voyage 2 was from New York to Liverpool.

Voyage 3 was from New York to various UK ports.



Voyage 4 was from New York to Newport, South Wales, then the Clyde. After which she was ordered to Southampton from where, from D Day plus 3, she made 11 voyages across the Channel to Omaha and Utah beaches. For example, on 9 June, she transported 573 troops, 161 tons of ammunition and 135 tanks to France.

Voyages 5,6 & 7 were in the Pacific and her last commercial voyage, at the end of the war, included the carriage of Australian women, war brides, back to San Francisco in January 1946.

So this ship only had a normal service life of 2 1/2 years before being laid up in the Suisan Bay Mothball Fleet for the next 33 years.

Admiral Tom Patterson was in charge of this fleet of redundant ships and considered that at least one of them should be retained as an example of the wartime Liberty ship programme and so the O'Brien was selected as a sample which had not been damaged, modified or cannibalised and she was kept low down on the disposal list until such time as an organisation could be formed, finance raised and volunteers found to look after the ship.

This resulted in the creation of the National Liberty Ship Foundation (NLSF), the current owners of the vessel and she finally steamed, under her own power again, down the Sacramento River from Suisan bay to San Francisco on 6 October 1979.

NORMANDY VOYAGE.

I first visited the ship on her berth at Fort Mason, San Francisco in 1992 and discovered the volunteers were raising funds in the hope of returning to the Normandy beachheads via various ports in the UK and France, this in 1994 to become involved in the commemorations of the 50th Anniversary of D day 1944.

It was organised that the ship would leave San Francisco southbound and meet up with SS Lane Victory, another WW2 veteran, off San Pedro and transit Panama together and then join up with SS John W. Brown of Baltimore, (the only other extant Liberty) to form what was called "The Last Convoy". Unfortunately for technical and financial reasons this did not happen and only the J.O'B came to Europe, calling first at Portsmouth.

A principle of NLSF in general is to try and keep the ship in 1944 condition as far as is possible and legal; for the Normandy voyage this meant the ship had to be fitted with some new equipment, notably a SatNav, and a modern radio station on the bridge and an oily water separator in the engineroom. This equipment needed an a/c power supply and the Caterpillar Company loaned a containerised deck mounted diesel alternator for this purpose, this unit being donated to the ship at the end of the voyage.

(The ship has a second Caterpillar alternator set as spare, in the tween deck, this unit being ex Alcatraz Prison, donated by the National Parks Service.)

There was some opposition to this projected voyage on the grounds of expense and risk of an old ship with a veteran crew but the ship was drydocked and surveyed to full ABS and US Coast Guard standards and had few voyage problems. This was a round trip of some 20,000 miles and cost some \$2.5 million and of the 7000 or so ships at D day 1944 it is claimed that the JOB was the only one to return 50 years later.

The ship sailed SF on 18 April and arrived Portsmouth 21 May 1994 and during the 3 day "Navy Days" in the RN Dockyard she welcomed over 23,000 visitors most of whom demanded to see the engineroom, quite a problem considering the single engineroom ladder for descent and ascent from the floor plates!

After Portsmouth and the Fleet review at Spithead the ship visited Southampton, Omaha Beach, Chatham, the Pool of London,



At the Spithead Review, June 1994

Cherbourg, Rouen and Le Havre which is where I joined her as a Fireman/Water Tender (very much over qualified!) for the return leg of the voyage.

We sailed from Le Havre on 22 July and crossed the Atlantic to Portland, Maine where the ship had been built in 1943. The shipyard no longer exists, now being a yacht marina, but there is an Association of Veteran Shipbuilders who were delighted to see once again the result of their efforts. From here the ship passed down the US east coast calling at New York, Baltimore, and Jacksonville. Whilst approaching the Cape Cod canal to enter Long Island Sound, we passed the SS John W Brown which, having transited the Canal was on a coastal passage to Halifax, Nova Scotia. This is likely to be the last time that two Liberty ships will pass at sea.

After passing through the Panama Canal (where, in the Gatun Lakes, we passed an eastbound Chinese owned Liberty Ship Replacement, a Sunderland built SD14) the ship called in at San Diego and Los Angeles, returning to San Francisco on 23 September 1994.

WATCHKEEPING AND THE CREW.

The average age of the crew for the Normandy voyage was between 50 and 70 depending upon which newspaper you read! They were all unpaid volunteers. Some were veterans of wartime seagoing, others were not seafarers at all.

Because of the known very high temperatures which would be encountered in the engineroom, and the rather high average age, it was decided to operate on four, three hour watches and engineroom watch comprising three men, and engineer watchkeeper, an oiler and a fireman/water tender. On deck, the normal three, four hour watches were kept.

On my watch the engineer was Kevin Kilduff, 52, an Irish American whose real time job was as an engineer on a Matson line catamaran type pusher tug which moved barges of sugar from Hawaii to San Francisco. This tug had twin diesel engines and Kevin's knowledge of steam plant was elementary to put it mildly! The watch oiler was one Ralph Ahlgren who was 73 and in real life was a retired printer from Sacramento. Ralph had to oil about 100 points on the main engine every half hour. My responsibility was the steaming of the two Babcock boilers, each with four fires and it was 38 years since I had been at sea as a watchkeeper. Our practice was, on taking the watch, to replace the burners in one boiler with four clean ones regardless of necessity. The removed burners were then cleaned and made ready for the next watch who exchanged the burners on the other boiler. If of course, there was a change in steaming rate or manoeuvring then burner tips had to be adjusted by size to match. The fireman was also responsible for the oil fuel pressure pumps, the feed pumps and the condition of the hotwell. It will be appreciated that when the sea water temperature rises, then all other temperatures rise and when approaching and leaving Panama, with a sea temp. of 87F the boiler-room temperature rose at times to 135F and the temp. at engine cylinder top level was 140F – it was necessary to use a gloved hand when climbing the ladders from the engineroom at this level. Liberty ships do not have any forced ventilation although the two vents at the Fwd. end of the boiler room are hand geared and can be trimmed into the wind from the floorplates. Further, Liberty ships have no automation in the engineroom save a (very erratic) thermostat controlling the steam to the fuel oil heater. Fuel temp and pressure are controlled by hand operated valves as is the speed of the forced draught fan steam engine. There is a float control in the hotwell controlling the

feed to the feed pump suction but this pump serves both boilers so hand check valves have to be controlled to balance out feed water levels in the boilers.

The crew of some 52 (this varied between the various ports, people came and went from time to time) was in effect led by Admiral Patterson, 70, who was I suppose the commander and who did the speeches, presentations etc, as necessary,

The master of the ship was Captain George Jahn, 79, a veteran of Liberty ships in WW2 and a one time San Francisco pilot.

The Chief Engineer was one Richard Brannon, 74, who had been a Chief Engineer officer for American President Line.

The oldest crew member was Clarence Rocha, seaman and onetime stevedore, aged 91.

Another seaman was Carl Nolte, a senior reporter on the San Francisco Chronicle who radioed in a report of activities on the ship every night so that the people of SF could follow "their" ship. Carl is now Chairman of the Board of NLSF following Admiral Patterson's retirement.

CONCLUSION.

The voyage completed on 23 September when she sailed in under the Golden Gate Bridge escorted by some 150 small craft of all types and followed by the Victory ship, SS Lane Victory which had come up the coast from San Pedro as an escort. Flowers were dropped onto the ship from the bridge as she passed under and on reaching her berth a ticker tape parade was organised through the city for the crew followed by a dinner in the berthside shed.

In 1966 the ship voyaged up the coast to Vancouver, Seattle and Portland, Oregon and she occasionally steams up the Sacramento River, past Suisan bay where she lay all those years, to Sacramento and she has recently sailed down to San Pedro. The ship is open to the public every day and one weekend per month steam is raised on one boiler and the main engine is turned (slowly) with the ship tied up to the berth so people can get the feeling of "steam and oil". Twice a year the ship does two or three successive cruises around the Bay all these activities being a means of fund raising to maintain the ship. In 2007 she will once again enter the floating dock for maintenance.

A few years ago she was hired by Hollywood (at a lucrative rate) to steam around the Bay whilst the main engine was filmed to represent the engines on Titanic, this for the film of that name! That the ship is still in good condition is a tribute to an outstanding British design and US workmanship and the labours of a dedicated volunteer crew.

This document is formed from an expansion of lecture notes used by the author.

David Aris, Oxenholme, Cumbria. January 2007.



Clintons on the JOB

President Clinton, sporting the appropriate knitware and cap, escorted by Admiral Patterson (?) and Capt. Jahn, with some of the Whitehouse press gang, on deck at Spithead, June 1994. Mrs Clinton can be seen behind them, meeting and greeting some of the crew. Ed.