# MARITIME HERITAGE ASSOCIATION
## JOURNAL

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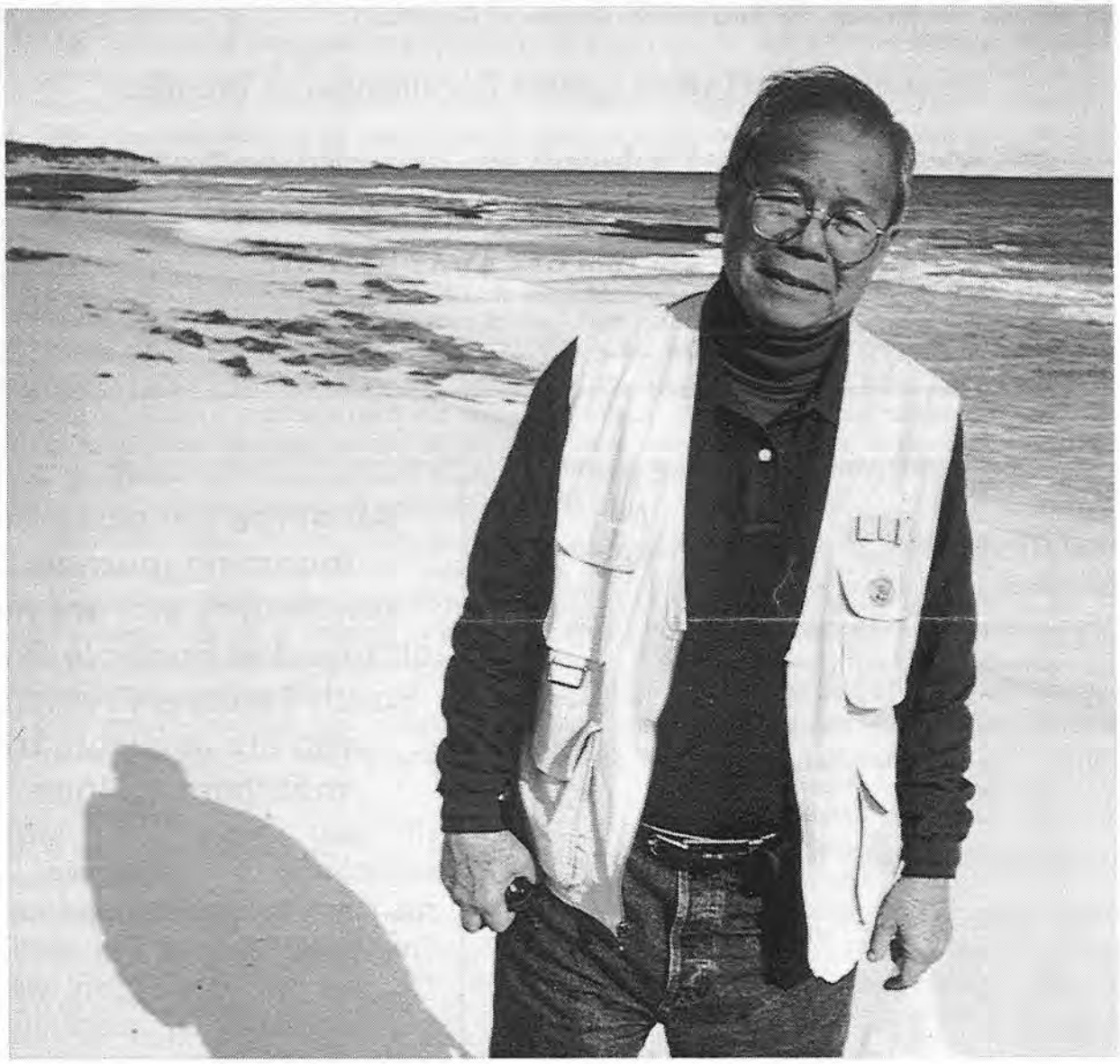

Now residing in the United States, Tom Leong, Filipino salvage master on the tug PACIFIC STAR during the 1964 refloating of the stranded ALKIMOS (*ex VIGGO HANSTEEN, ex GEORGE M. SHRIVER*), photographed on a July 1997 return to the site. The ALKIMOS wreck is on the horizon, above Tom's right shoulder. (*The final instalment of the ship's wartime career begins on page 5.*)

# MHA in Crisis!

**Do you believe that the Maritime Heritage Association (WA) has any useful role to play in the future? If you care about the continuing existing of the Association, BE AT THE 1998 ANNUAL GENERAL MEETING. The coming AGM will be one of the most crucial in the history of the organisation.**

**The Committee is already a small clique — not all positions are currently filled, and at least one senior Committee member will resign this year. Regrettably, current MHA President Nick Burningham has said that he will stand again, but whether the organisation can endure another year of his baleful eminence is doubtful.**

**Under Burningham's desultory leadership, the youthful and energetic committee has been sapped of much of its former vitality and vision. With the Classic and Wooden Boat Festival cancelled in 1997, only the Journal remains as a vestige of the organisation's former prestige. Current Journal Editor, Chris Buhagiar, has now given up the ghost and decided to go bush. (Thankfully, Peter Worsley has stepped into the breach and will take over this role, but from the safe distance of Geraldton.)**

## Someone should stand against Burningham as President!

**If no candidate will come forward to challenge him, the membership should at least question Burningham and the Committee at the AGM about the direction and health of the MHA.**

**DON'T LET HIM GET AWAY WITH IT!!**

**(See formal notification of AGM on page 20.)**

The Maritime Heritage Association Journal is the official newsletter of the Maritime Heritage Association of Western Australia, Incorporated.

Material for publishing or advertising should be directed, preferably typed or on disk, to: the Editor, 294 Chapman Road, Geraldton 6530, Western Australia.

Articles will be published at the earliest opportunity.



**All of the Association's incoming journals, newsletters etc. are now archived at *Porthole Prints*, South Terrace, Fremantle, and are available to members on loan.**

(If you have an unwanted collection of magazines of a maritime nature, then perhaps its time to let others enjoy reading it. Contact the Association; we may be interested in archiving the collection.)

# WHALEBOATS

***"The boats were dry and rode 'as gracefully as an albatross ... for lightness and form, for carrying capacity compared with its weight and sea-going qualities, for speed and facility of movement at the word of command, for the placing of men at the best advantage in the exercise of their power, by the nicest adaptation of the varying length of the oar to its position in the boat, and lastly, for a simplicity of construction which renders repairs practicable on board ships, the whaleboat is simply as perfect as the combined skill' of generations of boatbuilders could make it."***

The above paragraph is taken from *The Whaleboat*, by Willis D. Ansell, and the author is quoting *Nimrods Of The Sea*, by William Davis. It is probably the best summary that one could find of the good points of the New England, New Bedford or Nantucket whaleboat (as it was variously named) at its final development in the 1870s. This American whaleboat was the culmination of hundreds of years of practical experimentation and adaptation from earlier vessels used by the Basques, Dutch and British whalers and the coastal Indians of the north-east of America. The resultant vessel was as nearly perfect for its task as was possible. With minor variations, it became for many years the standard for whaling ships and shore-based whaling stations all over the world.

The requirements for whaleboats, whether operated from a ship or from shore, were fairly straightforward. It had to be:

1. Cheap to build or buy.
2. Light to row, hoist or drag ashore.
3. Seaworthy.
4. Fast and quiet under oars or sail.
5. Very manoeuvrable.
6. Easy to repair when damaged.
7. Strong enough to withstand hard usage.
8. Able to carry six crew, their harpoons and lances, tubs of long rope, spars and sails, and the various other minor but essential bits and pieces necessary for both the capture of the whale and the safety of the crew.

The final product of whaleboat development was a vessel usually between 28 and 30 feet long with a pronounced sheer and a beam a little over one fifth its length. The keel had a small amount of rocker and the stem and stern were the same, allowing great manoeuvrability going ahead and astern. This of course was an essential feature of a boat that had to get close enough to a whale for the harpooner to throw his harpoon as deeply as possible into the whale. There was little deadrise, and hard bilges gave stability. Combined with the rocker and a shallow draft, this allowed speed and manoeuvrability under oars.

There were usually five whaleboats carried on davits ready for quick launching. Three were carried on the port and two on the starboard sides, plus one or two spares on deck.

A 28-foot whaleboat weighed a little over 1,000 pounds (about 460 kg) empty and close to 2,000 pounds (about 900 kg) loaded. This lightness was a result of the method of construction and the materials used. Whaleboats were built quickly and cheaply; they were not expected to last for long and no fancy work was put into them. The normal whaleboat was planked with half-inch cedar (the inside ceiling being the same) on an oak keel, stem post and stern post and oak frames. The earlier boats were clinker planked but by their heyday most were carvel planked except for the garboard and the sheer planks which still

overlapped the adjacent planks. The keel was about 2 inches deep by about 6½ inches wide in the middle where the centreboard passed through, but tapered considerably towards each end. The frames were sided ¾ inch by about 1¾ inch at the keel, with this moulded depth tapering towards the gunwale. The gunwale and ribband or guard rail were also of oak as strength was needed at the top of the planking both to take the knocks when lowering or hoisting and to spread the strain of the oars. There was normally a rubbing strip of pine or oak fitted just under the sheerstrake for the middle two-thirds the length of the boat.

The bow of the boat had a small decked section with the thigh board behind. This board had a half-circle taken out, called the clumsy cleat. This is where the harpooner wedged his thigh when bracing himself for the throw. There were five thwarts for the rowers and a decked stern section. This deck braced the loggerhead, the oak post around which the line was taken from the tub to the harpoon. On top of the deck, and further bracing the loggerhead, was the lion's tongue, a curved piece of hardwood. This meant that when fast to a whale, the line went from the tub to the stern and then up the full length of the boat. All hands could then pull on it and douse it with water for cooling. It also meant that the pull did not come from the very bows of what was a fairly lightly built craft. Both the bow and stern had small raised soles called head and stern sheets respectively, on which the harpooner (bow) and steersman (stern) stood. These were normally left unpainted to make them less slippery. A large chock on each side of the stem guided the rope over a lined slot and out to the whale. The rope was prevented from jumping out of this slot by a pin through the chocks.

The usual complement of a whaleboat was six. This was made up of the steersman, four rowers and the harpooner who also rowed until close to the whale.

Different lengths of oars were used for the different positions: the bow or harpooner's oar and the stern oar being the shortest and the midship oars being the longest of the rowing oars. The steering oar, used when the boat was rowed, was considerably longer than any of the rowing oars, being up to 23 feet long.

Whaleboats were normally fitted with a mast and sail which could be lowered very quickly. These were used to cover long distances when the winds were appropriate. To improve their sailing ability the boats were often fitted with centreboards. When under sail, steering used a rudder which could be quickly unshipped when the mast was lowered. Harpooning was carried out under oars for manoeuvrability. When the harpooner had launched his harpoon and they were fast to the whale he changed places with the steersman (often one of the mates) whose task it was to kill the whale with the lances.

A boat carried two whale lines each coiled in its own tub so as to run freely. The total length was 300 fathoms of the very best manilla or hemp, usually specially made for just that use. One tub carried about three-quarters of the length of line, with the remainder in a smaller tub in the centre of the boat as spare to be joined to the main line if needed. Three or four harpoons were usually carried along with a similar number of lances. The harpoon heads were made of good quality soft iron which could take a terrific amount of bending and twisting without breaking. After use, these often needed straightening by the blacksmith.

After coming up as silently as possible on the whale the harpooner threw his harpoon and the boat was then fast to the whale. Depending on what action the whale took the crew would either pay out the whale line as the whale sounded, or manoeuvre for their lives if the whale decided to stay on the surface and attack. After changing places it became the former steersman's task to hurl the lances to kill the whale. Often the crew would have to tow the dead whale towards the whaling ship, a back-breaking job. If they were lucky the ship could sail to them and then the whale would be flensed from a platform hung over the starboard side. The blubber was placed in try pots on deck for trying into whale oil, also called train oil. The Americans were probably the first to try whale blubber in this fashion.

Previously the Basques, Dutch, Americans and English removed the blubber which was then placed in barrels for later trying on shore. As a result of over-fishing in the Atlantic Ocean this practice became less profitable as the whalers had to voyage further and further from their home ports. It was also impracticable in the widely exploited Greenland and Davis Straits whaling grounds. By trying aboard ship, and often shipping the oil home by other vessels, the American whalers could stay at sea hunting whales for years. This became common practice when whaling in the Atlantic waned and whaling became more important in the Pacific Ocean and, to a certain extent, the Indian.

With minor variations to suit special conditions, whaleboats changed little from the mid 1800s to those still in use today in a few places around the world. The famous Australian surf life saving-boat is reputedly based on these whaleboats.

## Peter Worsley

[ *Peter will be writing a further article on whaling for a future edition of the MHA Journal. He assures us that references will be listed at that time. – Ed.*]

# To The Editor ...

*Comments made by the Editor about the scuttling of HMAS Swan (December issue of the Journal) should have provided food for thought for all of us who claim to have a genuine affection for and interest in old ships.*

It is always sad to see ships destroyed. Until fairly recent times these masterpieces of Man's creation represented the most advanced mechanical technology of the age in which they were built, and ships remain the largest moving things we have ever created.

The *Swan* might not have been a very distinguished vessel in world maritime heritage terms, but in the Australian context she was certainly not unimportant, and the glee and seeming frivolity at the time of her sinking seemed almost childish — especially when one considers the enormous amount of time and energy which likely went into trying to come up with a viable plan to save her.

We Australians persist in remaining a `not quite' nation. We are inventive and hard working at times, but so often we seem to lack the gumption, prudence, wisdom — call it what you will — that we need in order to pursue worthwhile projects to a final, positive outcome. Think of the Victoria Quay Precinct: several members of MHA, together with many other individuals, tried very hard to develop an imaginative concept into a great maritime heritage centre. All that we seem to have achieved so far is the shifting of E- Shed — which only happened because commercial interests saw a buck to be made there.

If we are going to become a nation with a rich culture we are going to have to do better with how we select and retain our material heritage — for we have very little of it, especially of the maritime variety.

I am sorry that the *Swan* has gone. She would have looked good tied up at B-Shed. With the money it cost to prepare her for scuttling she could have been maintained for some considerable time.

**Ronald Richards.**

# The ALKIMOS:
## Fact without the Fanciful

*PART FIVE* *Chris Buhagiar*

*Doubtless every ship has a tale or two to tell; the more memorable tales sometimes involve interpersonal conflict. The VIGGO HANSTEEN is no exception. Among the wartime Allied merchant fleets, only the Norwegian Merchant Marine permitted female shipboard radio operators — though only a few — and this progressive policy unfortunately had a dramatic downside that was played out on the ship.*

VIGGO HANSTEEN: VOYAGE THREE, EAST

Piombino Roads, Italy, via Convoys UGS–47, VN–55 and VN–56. August 9 1944

Having offloaded a deck-load of crated assault gliders in Naples, the ship then moved on to Piombino where, during round-the-clock offloading of high explosives into Army DUKWs, two deaths occurred on board, a homicide and a suicide. That evening, while routinely checking blackout conditions around the ship, Able Seaman/Gunner, Kornelius Korneliussen, found the bodies of 2nd Radio Operator, Maud Steane, and the Gunnery Officer, Anker Kristiansen, lying in the Gunnery Officer's cabin. The radio operator, a young Canadian female on her first passage, had apparently spurned Kristiansen's advances. Following a bout of disconsolate heavy drinking ashore, he had lured her into

his cabin, shot her in the left temple, and then shot himself — the shootings going unheard because the ship was engaged in moving anchorage. Both bodies were taken ashore. Kristiansen being buried in the US military cemetery in Follonica.

Able Seaman/Gunner Kornelius Korneliussen, who found the bodies while checking blackout conditions around the ship, in naval dress uniform, circa 1942. The anchor sleeve insignia was worn from recruit on, below the anchor (though the portrait does not make it apparent). Kornelius is wearing three stripes - a stripe for each year of service, crossed guns, with the letters SSH, were worn by naval gunners serving in the merchant marine. (K. Korneliussen, Norway.)

As if in response to the drama, the weather that night deteriorated — the wind strengthened and the sea rose; intermittent thunder rolled across the harbour, and heavy rain started to fall:

*... 07.00 duty watch noticed ship to be dragging both anchors with 60 fathoms of cable each, and mooring buoy parted aft. Was possible other two might part. As ship under Shore Authority's instructions not to move, waited to see what would eventuate. Shore Authority reiterated not to move ship until weather improved. No unloading because of heavy swell. 09.15 situation precarious as ship had drifted dangerously close towards nearby vessel. Anchors therefore weighed and, without Authority's approval, moorings slipped and ship moved 09.35 to outer roads. 09.50 ship brought to an anchor — no pilot or other assistance.*

*15.30 received orders to move: 16.00 anchors up; 16.05 pilot on board, ship moved back into inner Roads. 16.20 port anchor, 45 fathoms. DM approx. F. 15'0" A. 21'0" ...*

A/B Leif Foss (right), who joined the ship in August, and fellow crewman, photographed (even though the taking of such photos during wartime was prohibited) starboard side, adjacent to the after deckhouse, on what appears to a Liberty ship, possibly the *Viggo Hansteen*. (via K. Korneliussen)

Before sailing, some two hundred German POWs together with their GI guards boarded for the return leg to Naples, where Norwegian Consul Klingenberg began an onboard investigation into the Piombino deaths: he read Log reports and conducted interviews — 1st Radio Operator Brynjulf Tvedt and Gunners Johansen and Olsen, as well as the Master and First Mate Jensen.

Hampton Roads, Virginia. September 18

*... 01.05 ship brought to an anchor: port anchor, 50 fathoms; DM F.8'10" A. 17'8" M.D. 13'3". 07.00 crew at work: general maintenance and preparing ship for unloading. 11.00 moved further into roads. 18.30 received orders from shore to bring all ammunition on deck prior to drydocking ship.*

*Sept.19*

*... 07.00 crew at work: began offloading ammunition into US Navy barge, and other deck work. 13.45 ship moved to Newport News Shipyard & Drydock ...*

*Sept.20*

*... 07.00 moved into drydock no.3; 09.00 dock pumped out – ship's bottom evenly coated with barnacles. After cleaning, two coats of antifouling applied, except to boot topping. 14.20 began refilling dock; 16.00 ship left dock and brought alongside Pier 3. Painting of boot-topping then commenced by shore workers. Crew off duty most of day: Louch ashore for a blood test: Stigkarlsen to dentist; Karlsen and Walberg paid off ...*

A studio portrait of Stoker Sverre Olsen, who joined the ship in September, and stayed with her until January 1945. (S. Olsen)

VOYAGE FOUR, EAST: With Convoy KMS–67, from UGS–57. Oran Roads, Algeria. November 3

*... 07.50 ship moved back to outer roads; 09.00 departed roads for Augusta, Sicily ...*

*Nov.9*

*... Light westerly winds, Force 3, medium cloud , calm sea. 06.34 departed Augusta Roads with Convoy VN–76, for Naples. 06.42 passed breakwater, steering on Captain's directions. 08.00 steering on set directions. 09.00 gunnery drill. Crew scraping and oiling deck, painting and other deck work. Carpenter making benches. Heavy rolling ...*

*Nov.13/14*

*... Bay of Naples: port anchor, 80 fathoms. During night, fresh westerly wind picked up. High sea. 01.00 starboard anchor also put out; 15.00 stopped at 12 fathoms, a large passenger ship running ahead, main and steering engines on standby. Nedrebo and carpenter called out, as well as Captain, Mate and 2nd Mate. Two gunners also on standby. Weather moderates during the day ...*

*Nov.18*

*... 06.45 weighed anchor and ship moved in to wharf. Numerous long stoppages during unloading through shortages of dockside transport ...*

*Nov.29*

*... 06.00 crew on deck, and getting ready for departure. 06.30 Pilot Capezzuto boarded; 06.50 left wharf, assisted by one tug. 07.00 discharged tug. 07.13 at anchor on outer roads: port anchor, 75 fathoms. Crew swung out boats and prepared ship for sea; took down dunnage and prepared no.5 hold for water ballast. 11.55 weighed anchor and departed with convoy for Augusta. 12.00 full speed; log out on 0. Steering on given routes and set courses. 24-hour lookout and gun watches ...*

CARGO HANDLING FACILITIES: MEDITERRANEAN THEATRE

W.H. Lee, Director, Vessel Operations Division, War Shipping Administration, to Assistant Deputy Administrator for Ship Operations. December 15

*... Please note the ... letter dated December 4, 1944 from Mr. Nicol, Deputy Regional Director of the Mediterranean. It appears that no difficulty is experienced in discharging ships laden with Army material due to the fact that the Army has adequate stevedoring equipment, but the difficulty apparently arises when the Army vacates a port and removes its cargo handling gear. Normally, such equipment would be furnished by civilian stevedoring contractors but such firms probably do not now exist; hence, the problem.*

*... Mr. Nicol requests that all ships proceeding to North African and Italian ports be completely furnished with cargo handling gear. This is not practical for, in the first place, it would involve a tremendous amount of equipment, most of which would be in use only during the discharge of the respective vessel and at all other times it would be idle, and also taking valuable cargo space.*

*No doubt we must find a solution and it seems to me the more practical method would be to locate at each port such material as is now available and then to augment that nucleus as may be required by shipping additional material from the United States with the objective of establishing at the several ports involved adequate cargo handling gear and arranging proper custody for same.*

VOYAGE FIVE, EAST

With Convoy HX–331. North Atlantic. January 8, 1945

*... Light north north-easterly winds, Force 3; overcast, smooth sea. 02.00 Pilot F.W. Clark boarded; 03.05 anchor weighed; 03.54 departed with convoy. DM on departure F 25'6" A 29'0" MD 27'3". Steering on pilot's directions ... 05.36 discharged pilot by Gedny buoy. Log out at 0. Steering on Captain's directions. 07.00 steering set courses. Sea watches from 00.00. Heavy swell. Held lifeboat muster for all except those on watch. All wearing lifesaving gear. Instruction given on putting out the boats ...*

*Jan. 22*

*... 14.55 St. Helen's Harbour, Isle of Wight, for re-routing. Ship brought to an anchor: port anchor, 60 fathoms. DM F 24'11" A 27'08" MD 26'4½". 21.25 departed harbour; 22.15 log out on 0 ...*

*Jan.23*

*... 05.20 off Grande Rode, Cherbourg, to await daylight and pilot. 09.27 port anchor, 60 fathoms. 18.40 moved in to wharf; 20.00 stevedores began taking off deckload securings and offloading begun ...*

*Jan.24*

*... 02.30 offloading of deckload completed — 425 tons. 06.00 crew were called for early departure; 07.10 left wharf, re–anchored on Roads. Awaited further instructions. 13.00 boat drill; 15.30 fire drill; 15.45 gun drill. General maintenance continued ...*

A protracted wait was now begun for further routing and discharge of cargo orders. Initial instructions were received on board next day, but it was February 12 before further sailing orders materialised. However the threat of war catching up with them remained ever present:

*... (WSA 620–W413 HAL 1560 TO CONWAY FROM BROWN WSA FOR HEMBOLD WSA FROM DEVLIN WSA) (ALUSNA LONDON SENDS) STEAMSHIP HENRY B. PLANT* ENROUTE ANTWERP REPORTED TORPEDOED AND SUNK AT 0445 HOURS FEBRUARY 6TH IN POSITION 17 MILES EAST OF RAMSGATE IN DOVER STRAITS. 53 SURVIVORS PICKED UP TO DATE. 8 KNOWN DEAD. RMO WILL GIVE YOU FURTHER RETURNS ON SURVIVORS ...*

* The HENRY B. PLANT had departed New York with HX–331, in company with the VIGGO HANSTEEN.

VESSEL TURNAROUND TIMES

Continuing delays in the turnaround of vessels in the theatres of operation was an inevitable result of the Army's insatiable need for supplies being totally dependant on finite and often inadequate resources available for discharging the ships carrying the supplies. In a November 22 memorandum to Justice Byrnes, quoting General Somerville, General G.C. Marshall, Chief of Staff, began:

*... Pending receipt of further advice from ... regarding your capacity to discharge, we are unwilling to increase the sailings in convoys 319 through 326. Because of your failure to discharge ships on the continent in October in accordance with estimates upon which future allocation was based, it is necessary to make downward revisions in convoys HX–321 through 324 as follows: 321: reduce northern France ships from 28 to 15; 322: reduce from 30 to 18; 32: reduce from 30 to 18; 324: reduce from 30 to 16. Since the early months of 1944 it has been a definitely* [sic] *agreed policy to schedule sailings from the United States to your theatre in accordance with the estimated and demonstrated ability of your ports to receive. The number of idle ships in your theatre has grown because of your insistent demands for more and more shiploads of supplies, accepting your assurances that there would be a material improvement in discharge capabilities. The world-wide shipping situation is so critical that we cannot accept any increase in the number of idle vessels; rather it is imperative that congestion be relieved and turnaround improved. Because of this, there is no alternative but to deny your request for more ships in excess of your capacity to unload them until you have restored to useful service a portion of these now immobilised ...*

Acute problems also existed on the home front in the co-ordinating of the loading of ships bound for the theatres of operation. General Marshall continued:

*I have checked with the various people concerned with*

[convoy] *CU–57, and while we appreciate the Army's problem we strongly recommend that only a one day delay be figured on rather than three days as requested by the Army.*

*We are already facing a serious deficit in availables* [available ships] *to meet forward military requirements, and obviously any loss of ship days* [through ships held up in port awaiting cargoes] *at the present time that can possibly be avoided will make our forward position that much more acute. I understand from our New York office and our tanker people that 12 of the tankers involved will probably not be ready to load until the morning of the 2nd. Since this is so close to the deadline the extra one day would be favorable to WSA, however, if we should slip over to three days for the convenience of the Army the disruption of cycles, subsequent confusion and the general loss of time on the 31 WSA ships involved does not, in our opinion, justify the extra time requested ... The Army stated 3 to 5 troopers will miss unless an extension is arranged. At this writing we are at an impasse. If we give ground the Navy will want to combine the next two westbound convoys so that they can catch up, but this means a further slippage for us, particularly on tankers.*

*Admiral Fairfield has, therefore, advised the Navy we stand pat unless they choose to overrule us ...*

FINAL ASSIGNINGS

During the period November 4 to December 14 Nortraship had been advised of the allocation of three more EC–2s and four T–2s* — bringing to an end this programme of assignings. Subsequent post-war transfer of vessels would be through outright sale.

* The EC–2 , VADSO, formerly ROBERT J. BANKS, was substituted for JOSEPH LEE. LEKTOR GARBO (ex ALFRED L. BLAXELY) and CARL OFTEDAL, also EC–2s, were substituted by WSA for the C–3 types asked for. The T–2s were FINNMARK, KIRKENES, HONNINGSVAAG and HAMMERFEST.

VIGGO HANSTEEN: VOYAGE FIVE, WEST. From Barry, Swansea. March 12

*... Steering set courses. Light-to-moderate south-easterly winds, Force 3/4' rain, moderate sea. 24-hour lookout and gun watches. Heavy rolling. 07.00 crew at work: painting in the wheelhouse, checking things on deck, repairing door hinges. Heavy rolling ... 18.00 no.4 lifeboat sustained large dents and had to be swung inboard ... Heavy rolling continuing ...*

*Mch.13*

*... Steering set courses. Fresh-to-strong west to south-west gale, Force 8/9; squally to hazy, high sea. 24-hour lookout and gun watches. 03.10 ship threw steering: swung starboard, in towards convoy; 03.15 stopped, two red lights illuminated. Heavy sea, set, and rolling — ship difficult to manoeuvre. 13.00 crew checking things on deck. 17.00 ship swung 180 °; 17.45 swung 180 ° again. Large sea, set and hard rolling. Clock 20 minutes back ...*

*Mch.14*

*... Steering set courses. Light/calm westerly winds, Force 2/3; overcast, moderate-to-medium sea. 24-hour lookout and gun watches. Slow and irregular speed. Heavy snow: fog buoy out. Some rolling. Clock 20 minutes back ...*

*Mch.15*

*... Steering set courses. Moderate north–easterly gale, Force 7; overcast, high sea. 24-hour lookout and gun watches. 10.40 ship ordered to take up convoy position 132. 15.30 in position. Crew splicing, some checking and cleaning, sweeping of snow off deck. Carpenter at work....*

HEAVY WEATHER DAMAGE. Captain F.W. Jones, Chief of Navigation, WSA, to Captain G. Conway. March 26

*Weather – April, 1945 – Transatlantic Route – U.K. and European Ports to New York or Western North Atlantic Ports. Beginning with the first of April there should be a material decrease of northwest gales and heavy seas and of less frequency on the trans-atlantic route. The average force of winds will be four to five and then from the southwest and west.*

*Conditions when leaving the U.K. and Continental European ports are very favorable until reaching mid-atlantic on the track where an infrequent, severe storm of short duration may be met. As the month of May approaches, and thereafter until October, favorable weather and sea conditions will prevail all across the North Atlantic Ocean ...*

VIGGO HANSTEEN: VOYAGE SIX, EAST

With Convoy HHX–348, from BX–157. North Atlantic, from Halifax, for Antwerp. April 11

*00.00. Log distance 159; Log speed 6.91 ... Steering on set courses. North-west by northerly strong gale, increasing to storm strength, Force 9/10, increasing to Force 11; squalls/rain. 24-hour lookout and gun watch. Heavy rolling, hard set and much water shipped. Impossible to get bearings ...*

*04.00. Northerly winds, Force 11. Clock twenty minutes forward; 05.00 ditto. Crew out from 05.00: swung in lifeboats, checked and secured deckload, and other*

*deckwork. Those off-duty out more or less all day ... 07.42 convoy hove–to, on instructions from Convoy Commodore ... 08.00. Nor-westerly winds, Force 11. Heavy set, much water shipped ...*

*12.00. Nor-westerly winds, Force 11 ... 16.00. northerly winds, Force 10/9. 19.40 orders received from Commodore to steer set courses at best possible speed ...*

*20.00. Northerly winds, Force 8/6. 21.20 ordered to ride out the storm: 22.00 instructions received on new set courses and speeds. During storm, much damage sustained by ship: forward three-inch pillbox, ammunition boxes, plus ladder and lifebuoy stand, dented; winch steam valve, bent; hawser pipe shutter plate, bent; water hose hoops, bent; lifeboats guide tracks, broken — three lost overboard; four lifeboats dented, some badly, with bilge keel rails broken; mast and sail for no.4 lifeboat, lost; davits and tackle sustained damage; gangway gates, bent, with locks broken off; smoke bombs lost overboard; two large hawsers and tarpaulins lost overboard; glass in scuttle in gunners' deckhouse aft, broken; three emergency nets and ladders damaged; leaks in starboard seamens' cabin, aft; accommodation ladders, wrecked. Further damage expected to show up later ...*

*Apr.12*

*... Riding weather on set course and speed. NNW winds, Force 3; overcast; medium sea. 24-hour lookout and gun watches. 07.00 crew at work: cleaning up after the storm. Checked and secured deckload, lifeboats, and other deckwork. Deckload of locomotives and tenders required re-tensioning of securings. Some water in chain locker and ammunition storehouse. 16.25 received orders for convoy to regroup — steered on Captain's directions during reassembly ...*

*Apr.13*

*... Steering on set courses. Light south–westerly winds, Force 3; light cloud; moderate sea. 24-hour lookout and gun watches. 05.00 message received of death of President Roosevelt: ships' ensigns required to be at half-mast for whole day. 07.00 crew at work: oiled stays after the storm, swung out and checked lifeboats. Clock twenty minutes forward ...*

*Apr.14*

*... Steering on set courses. Calm south to south-easterly winds, Force 2; overcast; moderate sea. 24-hour lookout and gun watches. 03.00 clocks twenty minutes forward; 05.00, ditto. 07.00 crew at work: spliced, different clearing and deckwork; also helped with cleaning of aft cabins. Order received from Convoy Commodore to have flag at half–mast during evening memorial service for President Roosevelt. Heavy rolling ...*

*April 17*

*... Steering on set courses. Calm easterly winds; weak sea. 24-hour lookout and gun watches. Crew cleaning and painting winches; carpenter at joinery work. Clock twenty minutes forward ...*

*Apr.19*

*... English Channel. 24-hour lookout and gun watches. 07.00 crew at work: painted winches, touched up on deck, as well as other deck work. Carpenter repaired raft; gunners checked guns. 19.27 a row of deepwater bombs was seen to explode *...*

*Apr.20*

*... 04.00 another row of powerful deepwater bombs exploded close by, to starboard. 06.00, log in, different speeds. 08.00 arrived Downs: manoeuvred at slow speed, then stopped to await pilot. 08.06 pilot boarded: ship continued on his directions. 11.30: port anchor, 60 fathoms ...*

*Apr.21*

*... 04.12: departed anchorage, for Antwerp **...*

* Still some three days out from the English Channel, the CYRUS H. McCORMACK and EMPIRE GOLD were both torpedoed and sunk on this day. VIGGO HANSTEEN'S log entries make no mention.

** On November 28, 1944, the first Allied convoy had arrived at Antwerp, opening the port for the British and American armies. Hundreds of ships were now maintaining a supply shuttle service between British ports such as Swansea, Cardiff and Belfast, and the Continent ports of Cherbourg and Arromanches, extending to Antwerp, Ghent, Rotterdam, Le Havre and other captured ports, as soon as they could be re–opened.

VESSEL DELAYS. UK and Continental Europe

P.E. McIntyre, Director, UK and Continental Section, WSA, to Captain H.R. Bishop, Acting Atlantic Coast Director. April 18

*... We sent you [a] copy of our letter of April 4 to Mr. Monroe* directing his attention to an exchange of Army cables dealing with the question of ships at U.S. anchorages awaiting call forward to the Continent ... We now quote for your information ... Mr. Monroe's letter sent to us dated London, April 11:*

*"... Only a few of our Commodity Loaders have been delayed because of the necessity of stopping at the U.K. to lift heavy deck cargo such as tugs and locomotives. In any case, the Army should soon be able to accept all heavy lifts on the Far Shore.*

*There is more to be said for point #3 since a greater number of our Commodity Loaders are loaded with a mixture of U.K. and Continental cargoes. We are currently being confronted with a particularly difficult problem in handling*

*the glider ships which arrive with landing mats for the Far Shore and top stowage cargo for the U.K. We are minimising the waste of shipping by forcing the Army to use these ships in the single voyage storeship program as soon as the top stowage cargo has been removed, or by combining the landing mats of two or more ships into a single full cargo on arrival in the U.K. I realise that you have your own loading problems in the U.S., but our work is made difficult when U.K. cargo is stowed with HAIL or WIPE cargo.*

*The cable Ex.26619 does not explain satisfactorily the delay of Far Shore vessels at the anchorage. Over the past month, 72 of our vessels have been delayed at the Downs, an average of about 2 days per vessel involved. The most important cause of this delay has been the fact that the vessels have had drafts in excess of the Scheldt limits at the time of arrival. Other reasons have been adverse weather, mechanical breakdowns and enemy activity. We have been after the Army almost daily in an effort to get the deep draft ships into the Scheldt at the appropriate time, irrespective of priority. You will be interested to know that the TALISSE, which is our first ship in the Dutch program, must be sent to Antwerp immediately on arrival, or it will be delayed about six days because of the tides. For a week we have been calling this matter to the attention of the Admiralty and the Army, and hope that the TALISSE will not be delayed. It now looks as though the ship will be late anyway and may have to wait at the Downs.*

*When vessels arrive at the Downs drawing too much water for the Scheldt at the time of arrival there is very little we can do. As you undoubtedly know, there are no facilities at the Downs for lightening these vessels. While the Army has promised to do everything possible to lighten the vessels in advance, they have not been able to solve our problem by the alternative of diverting the vessels into the Solent, primarily because the Solent does not have adequate facilities. We are still pushing the matter aggressively, but, in the immediate future, the high spring tides and the better weather should ease the problem ..."*

Colonel Traub's letter to Mr. Monroe - April 7th -

*" ... Following our recent discussions with the naval authorities concerned, we are carefully watching developments. To date it would appear that a marked improvement is taking place. All ships from HX 343 arrived at Continental discharge destinations within 48 hours of convoy entering ETO waters. All ships from HX 344 arrived at ports within 72 hours of arrival in ETO waters, with the exception of the J.J. LUCKENBACH, which had an unusually deep draft and which was held at the Downs owing to uncontrollable tide conditions. The full results on HX 345 are not yet complete. However, a preliminary survey indicated that sailings have been equally expeditious. It is believed therefore, that the time has not yet arrived for the joint TC/WSA representations proposed in the event that unsatisfactory conditions continue. Should the necessity arise - and it may well do so during the coming spring tide period - we will not hesitate to request your assistance. Reciprocally, it is suggested that you inform me of any cases which would appear to you to be unreasonable ..."*

VIGGO HANSTEEN. Aground: April 27

*17.10 hours left Antwerp in ballast, bound for U.S.A. via Southend for convoy.*[Convoy ON-300] *Draft F.11'10" A.17'4" M.D.14'7"*

*Apr.28*

*15.30 left Terneuzen Anchorage in convoy. Convoy No.15. Pilot P.J. Greiner. 21.15 started to fill saltwater ballast in No.2 and 3 deeptanks ...*

*Apr.29*

*02.30 stopped filling water ballast. 03.05 received signal from the Commodore: "No pilot available, proceed to Warp Anchorage".*

*Proceeded at various speed, steering courses laid down by Navigation Orders No.1 and Defence Regulation No.43, TA3, making allowances for wind and tidal current. Wind:West. Force:4-5. 07.25 passed buoy B.1. Steering various courses for Warp Anchorage through Oaze Deep Channel. 07.37 stand by engine. 07.43 slow speed.*

*07.48 ship was found to have come too far to the north of Oaze Deep Channel and had grounded while proceeding at slow speed ahead on Oaze Deep Bank in 15 feet of water. (Low water at 09.30 British double summer time.) Between 07.53 and 08.37 tried to get ship afloat by going alternately full speed ahead and astern, but without success. 08.37 stopped. Started to empty water ballast in No.2 and 3 deeptanks, and awaited high water.*

*10.10 ship started to move. From 10.18 by going full speed astern, ship refloated 10.32. 10.32 proceeded to anchorage. 11.03 ship brought to an anchor 295°, 8 cables from West Oaze buoy. 12.00 pilot R.E. Clare embarked. 12.12 weighed anchor. 12.59 ship brought to an anchor at Southend Anchorage "J.23". Draft F.13'9" A.18'0" M.D.10'½". Bottom tanks and bilges were sounded and found dry. Ship has apparently not sustained any damage.*

WAR'S END: Captured Enemy Shipping

Before the Allied capture of the northern ports and the liberation of Denmark and Norway, very little German shipping had fallen into Allied hands. Once these areas came under Allied jurisdiction, this situation was expected to change.

Captured enemy shipping fell roughly into three categories: those captured by the Allied forces in the course of operations in the liberation of Europe; those which at the time of general German capitulation were regarded as having been surrendered, and those vessels of the allied nations recaptured or found in the course of these operations. By an agreement being negotiated, enemy ships captured or found by Allied forces prior to the general surrender would be turned over to the Combined Shipping Adjustment Board for disposal in accordance with Allied requirements.

The disposal of enemy ships in Norwegian ports at the time of general German surrender would be subject to an agreement between the Allied nations concerned. In instances where the Norwegian Government could re-establish clear title, little reason was envisaged for delay in restoring these ships to Norwegian ownership. The question of equitable distribution and getting the ships operational as quickly as possible was also being considered. Such distribution would be for manning and operating only, without prejudicing their ultimate disposition and title.

VIGGO HANSTEEN: VOYAGE SEVEN EAST

Bergen, Norway, from Baltimore. June 27

Bergen was a brief stop — sufficient to allow much needed food parcels to be sent ashore, disembark fourteen passengers [Norwegian seamen returning home] who had joined ship in Baltimore, and take on the wife and daughter, Elsa, of the Chief Officer, Laurits Jensen, for the final leg of the voyage. A high-speed run was then made to the unloading berth in Vaksdal where unloading of the first consignment of American relief wheat and sugar for Norway was begun, the crew themselves assisting with this operation as well as with more food parcels and provisions for their liberated countrymen. As the first Norwegian ship to arrive in post-war Norway, VIGGO HANSTEEN was given a "joyous reception" by the local populace, with brass bands playing and the ship bedecked in bunting for her arrival in both ports. In celebration of their homecoming, the crew was given the next day off. Fourteen paid off.

REMOVAL OF ARMAMENTS FROM THE NORWEGIAN FLEET

In the July 11, 1942, Exchange of Notes between the US Secretary of State and the Norwegian Ambassador, provision had been made for the installation on Norwegian vessels of armaments and other protection devices and equipment. These items, as well as their installation, would be at the expense and for the account of the US Government, and would remain its property. The Agreement also provided that ensuing repair of damages to Norwegian ships that were caused by acts of war or by operation of the vessels under war conditions — as well as their repair or replacement necessitated by their being operated under war conditions — would also be made at the expense of the US Government.* As the Agreement contained no specific reference relating to expenses incurred in the eventual removal of this equipment, it had now become necessary to *interpret* the provisions of the Agreement in order to establish just who would carry this cost. By a July 16 memorandum to George Mejlaender, Nortraship, Leo T. Crawley, Administrator, Foreign Economic Administration, WSA, elaborated:

*... the removal of the defensing and degaussing equipment ... should also be effected at the expense of the United States Government (during the Fiscal Year 1946) and under its directions ... This interpretation of the July 11 Agreement, moreover, is subject to the provisos that such removals shall be effected ... only where (1) such removal will promote the War effort, (2) the appropriate shipping and defence authorities agree that it is safe and proper to remove such installations in view of the expected use of the vessel, and (3) the necessary repair facilities are available in US yards to accomplish such removal, in light of the overall war demands on such facilities ...*

The US Government would continue to meet its repair and damages obligations under the terms of the Agreement provided they occurred before VJ Day (12.01am., September 2, 1945). In relation to the removal of armaments, the deadline was to be June 30, 1946 (the end of the fiscal year).

* Repairs of damages not caused under these circumstances would be borne by the Norwegian Government without any US Lend-Lease assistance.

VIGGO HANSTEEN

Swansea, for Antwerp. August 7

*... 13.55 arrived Terneuzen Lock, Schelde River. 14.05 went*

*into lock, then changed tug PIERRE for two US Army tugs for assistance up canal. 18.42 alongside berth 34, Ghent. Shore authorities had not issued any shore leave for the crew today ...*

*Aug.9*

*... 06.00 seven teams arrived to begin unloading into barges, these being moved alongside between different hatches. 07.00 crew at work: painted signal mast and fittings, sidelight screens, swan neck and pipeline and midship alleyway. Scaled rust on boatdeck, cleared on upper deck. Carpenter at joining work ...*

*Aug.10*

*... 07.00 crew at work: 07.30 stevedores continued to unload. From 09.00 crew voted for 1945 Norwegian Parliamentary Elections. Voting carried out according to instructions received — two separate cabins used. Witnesses: Steward E. Einarsen and Seaman R. Rastad. Vote Receiver: Third Mate, L. Larsen. Instructions for voting posted in the officers' and seamens' messes beforehand. Voters had to show official documents for right to vote — 37 men voted from crew of 44. Two did not vote, five under age ...*

*Aug.13*

*... 05.30 crew called out. 06.00 pilot boarded: ship left wharf 06.30 assisted by two US Army tugs. 07.05 alongside berth 58 to take on sand ballast by grab crane.*

*10 00 crew's shop steward, Birger Ellingsen, reported to ship's Master, of an instance of theft on board. 12.20 loading of sand ballast stopped by telephoned instructions from WSA. Awaited further orders.*

*16.30 received orders not to take on more ballast and to sail to Antwerp as soon as possible. 16.45 pilot boarded: 17.15 two US Army tugs arrived; 17.50 let go of tug astern and continued down channel on pilot's directions with one tug ahead. Crew on standby while running down channel. 21.30 at anchor on river outside Terneuzen — awaited daylight. Port anchor, 60 fathoms.*

*Aug.14*

*... Antwerp. Ship's trial held on board, in accordance with Seamens' Act, No.64: two of crew accused of theft of sheeting — punishment imposed of 15 days' bottom wage of Kr.88.50, as well as replacement of items. Present as assistants in trial were Chief Engineer Trygve Froland, Donkeyman Birger Ellingsen, also First Mate Lauritz Jensen and Oiler Alfred Hagerup. Accused had nothing to say about punishment and assistants declared the trial to be fair ...*

*Aug.16*

*... 06.00 one team of carpenters boarded: old dunnage and supports removed and hold lined with boards. 07.00 Husa, Kirnen, Rokkones, Kile, Brorvik, Bosun and ship's carpenter at work; others off duty for VJ Day ...*

*Aug.30*

*... 06.00 continued to load ammunition. Took down blackout curtains, etc ...*

*Sept.4*

*... 05.00 took off hatch covers; 06.00 continued to load. Carpenters began securing load in all holds, as well as constructing timber deckhouse on foredeck, for incendiary bombs ... 07.00 crew at work: oiled on boatdeck, painted aft mast, touched up on deck and in alleyways. Gunners painted in storehouse etc. 10.00 held another fire drill ...*

*Sept.5*

*... 06.00 carpenters continued securing load in all hatches. 08.30 one team continued to load in no.2 until 13.30, and in no.4 until 15.30. Then transferred ashore to begin loading incendiaries into foredeck house. 21.30 loading of incendiaries completed ...*

*Sept.7*

*... 13.13 all loading completed: carpenters shored and secured in hatches and on deck throughout loading. All work done under supervision of US Army and US Coast Guard, and in accordance with regulations: Loaded 7113 tons ammunition, including 16 tons on deck. Total DWT. 9532 tons. DM F.25'5" A.27'0" MD.26'2.5" Fresh Water ...*

VOYAGE EIGHT, EAST

North Atlantic, for Brest. October 17:

*... Rotating sea watches. Force 9 W/NW winds; large sea, a lot of rolling, set, and much water shipped. Steering 079°. (Comp); 102 ° (Stand); Dev.2; Drift 0; Mag. Var. 100; Var.21; True Course 79°.*

*... 07.00 crew cleaned cabins and alleyways, as much water shipped. 08.00 port lifeboats filled with seawater and securings loosened. 13.30 winds Force 9/10. No.2 lifeboat knocked out of chocks; altered course to 0100, half ahead until 14.15 when full speed resumed. 15.30 weather necessitated reducing to half ahead again. Violent rolling. 19.30 received signal from Admiralty: "Your destination is changed to Brest. Acknowledge". Altered course accordingly. Lat.49°.05 ' Long.19°.27 ' (D.R.), Lat.48°.47 ' Long.19°.02' (Obs.) ...*

FORWARDING OF MAIL: From Maritime Department, Nortraship:

*Dear Captain Thorsen*

*We confirm receipt of Your letter dated the 3rd of this month, in mentioned correspondence, to which You refer for undersigned to reply to.*

*We are naturally very sorry to hear that You are not satisfied with the way the mail has been forwarded to You, and we have therefore started an investigation to find out what the situation is with this particular case. Mail to "VIGGO HANSTEEN", same as for other ships, is sent out by our Ship's Mail Department according to the information that it has received from the Freight Department about the ship's position. The Freight department only pass on information about the last position of which it has been informed itself...*

*We naturally agree with You that we had plenty of opportunities to reach You with mail in Swansea, where You were in port from 9 July to 4 August, and also in Antwerpen where You were in port from 15 August to 9 September. As You will find from the position notifications however, we did not receive the required information until it was to* [sic] *late to forward the mail.*

*We note that You received private America post in the mentioned ports and then presume that You yourselves had given the senders the required information. We would naturally also have been able to reach You if we had received the same information ...*

VIGGO HANSTEEN. October 30

*... Brest Roads. 08.30 stopped for pilot, then continued. 08.58 anchored because of fog. Port anchor, 60 fathoms ... 12.55 anchor weighed; 13.24 re-anchored because of fog. 13.55 anchor weighed anchor; 14.50 re-anchored off Brest Mole and awaited orders. 15.10 pilot departed. 16.10 another pilot embarked. 16.15 anchored alongside directed loading berth 17.30 ...*

*Nov.7*

*... 07.00 crew at work: painted outboard, re-rigged aft carley float. Dressed ship rainbow fashion, on orders. Unloading continued ...*

*Nov.8*

*... 14.35 left wharf. DM on departure: F.9½" A.16'9" M.D. 13'1" ...*

VOYAGE EIGHT, WEST

Barry Docks, Swansea. For Boston, Massachusetts.

November 12

*... 07.00 crew at work: touched up outboard, oiled heavy derrick rigging forward, cleared on deck, armament checked by gunners. Second Mate as loading guard, Third Mate and Stidal repaired lifeboat covers, etc. Mate on watch during night.*

*Kvammes and Amundsen had night watch. Though watch began at 16.00 previous evening, both went ashore. Amundsen returned approx. 22.30, Kvammes around midnight, but first seen on deck by Mate 01.15. Claimed had been on board whole time but had not been seen anywhere on board: other crewmen had seen him ashore in the pubs ...*

*Nov.23*

*... Loaded 2182 tons Army supplies; also: 135 tons new dunnage; 100 tons old dunnage; 630 tons bunkering oil; 430 tons water; 245 tons stores, ammunition; 286 tons perm. ballast. Total 4008 tons DW. DM: F.12'10" A.19'0" MD.15'11".*

*07.30 sea pilot boarded. 08.20 left wharf, assisted by two tugs. Steered on pilot's directions. 08.36 discharged pilot ...*

---

THE SHIP IS COMMITTED TO VERSE

*Oh, gather round and let me now a wonderous tale unfold.*
*A tale that round old Norway's fires you'll frequently hear told.*
*Of the good ship "Viggo Hansteen" and her merry, gallant crew,*
*and their famous trip from Barry, Wales, to Boston, Massachu.*
*"twas on November 23rd she lay at Barry Dock,*
*awaiting her four GI Joes to board at eight o'clock.*
*Four passengers, the Captain said, and none would doubt his word*
*five passengers instead they got, but not the sort they'd heard.*
*For up the gangway steep they came, four ladies (and a MAN),*
*with trembling knees and quaking hearts and faces waxy wan.*
*"And what are you?" the First Mate said, his face a stony mask,*
*"Four ladies (and a Man)", they cried, "but pray, why need you ask?"*

*Into the messroom slow they went, their faces slightly dazed,*

*and Viggo Hansteen in his frame looked down ... and was amazed.*

*And then a clamour filled the air, sharp barking rent the night,*

*into the room the Captain strode, just adding to their fright.*

*Thunderously his voice boomed out, "We've got no room for dames,*

*so into the hospital ward you go, we make no luxury claims". With shaky knees they slunk away, and into their bunk with dread,*

*when hark, a fearsome voice did say "With War Shipping I am fed".*

*Now is the Viggo on her way, she rides the waves with pride.*

*It seems as though she's well aware of whom she has inside!*

*And slowly thaws the Captain's wrath, he is feeling so much better.*

*He eats his pride, sits down to type, and send them all a letter.*

*Thus they began their happy days. They filled each lazy hour*

*with turkey, poker, birthday cake, and dips in the Captain's shower.*

*The cook applied his magic art, the messboys worked like nailors.*

*And Neptune took the chance to show that ladies can be sailors.*

*Cape Race they passed in record time, soon off the ship they'll clamber.*

*But not alone they leave you now ... you have FOREVER AMBER!*

*Just offer them a first class berth on Normandie or Queen,*

*they'll say its best to go a sailing on the good Viggo Hansteen.*

*The Vikings proved themselves again ... on this they all agree ...*

*that Norway holds her glorious place upon the deep blue sea.*

*THE FOUR LADIES**

* *"The Saga of the Most Remarkable and Extraordinary Voyage of the Good Ship Viggo Hansteen"*: original document signed by Ethel Rusk, sister of the former US Secretary of State; as well as by Jean Wiesner, Vera Gandy and Liesel Vierkus, passengers on the ship on the voyage to Massachusetts. Original document, dated November 23, 1945, in the possession of A. Bredal–Thorsen, Jaren, Norway.

*[An account of the ship's subsequent career and final abandonment may follow at a later date — Ed.]*

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# PRESERVATION AND DEHUMIDIFICATION OF LAID-UP MERCHANT SHIPS

## (Part Two) by Chris Buhagiar

*The previous issue of the Journal began an account of an early post-war study of the feasibility of applying dehumidification techniques in the long–term preservation of the interiors of the United States' vast fleet of shipping held in strategic reserve; as well as a comparative analysis of the effectiveness of various proprietary brands of paints etc. in the preservation of exteriors. The pilot vessel in the study was the EC–2 JOHN STEVEN SON. The account now continues.*

### Dynamic Dehumidification

The two means employed by the US Navy in maintaining the required humidity were dynamic (automatic) and static. Dynamic dehumidification was established by first thoroughly cleaning a vessel's compartment, sealing it to prevent water or moisture leaking into it, drawing the air from it, passing the air through a moisture remover — a desiccant — and then returning the air to the compartment. Desiccants were either silica gel, activated alumina, activated bauxite, or others.

Naval practice employed a dynamic dehumidification machine that incorporated a blower that passed the air to be dehumidified through a desiccant bed. In some cases, a booster blower would be required to force the dehumidified air to all the desired outlets in a subject vessel's zones, while in others the air would leave the machine at sufficient pressure–head to distribute properly. A flow metre was mounted on each machine to indicate the rate of airflow through it. The machine could have either single or twin beds of desiccant. If twin beds were used, one was for drying the air supplied to the zone under dehumidification while the other was being reactivated. The dual-bed machine automatically shifted back and forth from one bed to the other. In the singe-bed type, reactivation of the desiccant could be done during the hours when dehumidification was usually not required. Automatic means were provided to stop moisture removal and to reactivate the desiccant when it had become sufficiently exhausted. For reactivation, a blower drew in weather air. This was then heated, passed through the bed which evaporated the moisture from the exhausted desiccant, to discharge to the outside atmosphere.

The use of dynamic dehumidification allowed the stowage within the holds of a vessel, of all deck machinery and equipment, as already explained, and avoided the use of large warehouse space, as well as ensured that parts so stowed would not be lost, and would be preserved in a manner that allowed their reuse at some future date without any reconditioning.

### Static Dehumidification

Static dehumidification — the simple placing of metal containers of desiccant into void spaces — was used for compartments not provided with normal means of entry, such as a space entered into by a bolted plate manhole; for example, the fresh water tanks. The amount of desiccant needed for the initial drying out of a space was lb. for each 35 cubic feet of volume of the space. (The use of static dehumidification was discouraged because of the work involved in the frequent inspections necessary to ascertain the moisture content within the space.)

### The Dehumidification Tests on the JOHN STEVEN SON

Dehumidification machines were installed to serve each of the three zones, and wooden deckhouses constructed to protect them from the weather: two were dual–bed types, and the other — for moisture determination — was on loan from the Navy. Associated air-distribution systems made maximum use of the ship's existing pipelines, though new lines or ductwork were added as necessary.

In general, the test procedure involved the compiling of daily records of the kilowatt–hours used for circulating dehumidified air through each zone, as well as that used for reactivation and circulating air during reactivation. Daily records were also kept of the apparent number of cubic feet of airflow of dehumidified air circulated to each zone from the machines; the amount of water removed from zone 2 by the dehumidification machine there; the average temperature of sea water at one point; the hourly condition of the ship from twenty–four humidistat locations; the hourly condition of the ship, from eight recorder locations; a graph prepared from manual observations of the ship's condition at the humidistat locations; and a weather graph, from local observations. Data was also obtained from specialised equipment, and additional manual readings taken aboard ship were analysed and presented as needed to clarify the progress being made. Treated surfaces, both interior and exterior, were inspected at designated intervals.

The major problem during the first several weeks of machine operation was the readjustment of the amounts of dehumidified air liberated in the various parts of the ship in order to attain proper balance of dehumidification and uniformity of results throughout the ship.

Each of the three dehumidification machines was controlled by an electrically–operated system with humidistats located at selected points throughout the zone. The record of temperatures and relative humidities at selected points throughout the vessel was kept by two independent means. The control systems had been designed to permit various combinations of controls in order to determine the most appropriate system.

Slow Progress

By the close of January 1946 all spaces had been closed in and sealed tight. The period of drying out the forward Zone 1 spaces, from the bow to the after end of hold 2 was begun on January 14, a Cargocaire dehumidification machine being used. Drying out Zone 3 — from the after bulkhead of the machinery space, to the stern, began four days later — a Lectrodryer machine being used. On January 25, work in Zone 2 began (the engine and boiler space, hold 3, and the after deckhouse) with a smaller capacity Davison machine. Early daily readings in each hold were encouraging but it was expected to be another month before the percentage humidity in each of these spaces could be brought down to 30 – 40° and the maintenance drying phase begun. The Commission was however becoming anxious about the cost of the work being already well in excess of the $200 000 set in the contract. Cost breakdowns under job specification numbers supplied by Todds had been audited by the Commission but payroll figures supplied did not specify the relevant job number, so labour costs per item of work could not yet be verified.

It seems little wonder that even at this relatively early stage of the Todd study, the Commission was moving away from the concept of applying dehumidification to its laid-up ships. Initial orders with Cargocaire for one hundred dehumidification units and twenty-five sets of control and recorder instruments for the T–2 reserve fleet had already been cancelled and the Commission was busy trying to limit cancellation penalties by arranging for the Navy to accept the units as part of their parallel contracts with Cargocaire. A similar order for fifty units had also been placed with the Pittsburgh Lectrodryer Corporation, as well as another for fifty sets of control and recorder instruments from the Friez Bendix Corporation. [The Commission had earlier shipped a number of dehumidification machines to the Marinship Corporation, and control and equipment for trial installation in the machinery spaces of T–2 tankers. After the Commission's February assigning to the Reserve Fleet Division the responsibility for the preservation of all laid up ships, all Marinship dehumidification activity ceased on or about March 15, when these vessels were moved back to the Suisun Bay reserve fleet.]

The Nail in the Coffin of Merchant Ship Dehumidification

H.E. Richard, Special Assistant to the Acting Chairman, USMC, to H.L. Vickery, Commissioner, Shipyard Disposal Committee. March 4, 1946:

*Friday morning I went over to the dehumidification studies at Todd Repair Yard at Hoboken with Mr. Hickey, Mr. Himmler and Capt. Willison, all Maritime Commission representatives. We went aboard the Liberty ship which is under study. We went through typical compartments to observe the work which had been performed ... Without reference to cost, Todd has done a bang-up job of preparing the ship for studies, but there is evidence of their slacking off in the preparation of the engine room for permanent lay up as required by the Navy. This may be because the costs were running high. It was assumed that the Navy requirements would be met in applying protective liquids and greases to all machinery parts.*

*I observed considerable unnecessary expense on this job, such as building a steel box in which to place a hygrometer. This steel box, which was under a shelter, must have cost about $150 at today's rates. If it were intended to be a temporary box, it would seem that wood would suffice. The sand-blasting and scraping that I understood was to have been done was not as thorough as it might have been, and I understand from Capt. Willison that, in sand-blasting the*

*hull, the work was commenced from the bottom up, thus necessitating more labour to go over the hull to clean off the scale and dust that had fallen down as they worked upward ... From the apparent cost of removing deck machinery and equipment and mechanically sealing the ship, it would appear to me that twenty-five to thirty thousand dollars would be necessary for this function alone, exclusive of applying paints, preservation oils and the installation of dehumidification machinery. Other costs would be in proportion ...*

*Subject to analysis of Mr. Hickey's report, I am firmly against dehumidification for Liberty ships and other ships which present no greater problem than the ships laid up from the last war. Were it my ship and I desired to use it after, say, a period of ten or fifteen years, I doubt very much that I would employ an expensive dehumidification system to preserve the ship ...*

The contract with Todd Shipyards Corporation expired on April 5, 1946, with the study still incomplete. At March 19, total payments to Todds by the Commission had amounted to $573 825.46, of which labour alone consumed $418 321. [Final adjusted contract price at May 14, 1948, totalled $398 944.95]. Todds had been recommending to the Commission a six–month fixed–price extension to the contract, with a proposal that this additional time would be spent completing the development of all the dehumidification work on the JOHN STEVEN SON — which was nearing a consistent 30% humidity in zones 1 and 3, though zone 2, with a smaller capacity machine and perhaps more residual moisture in the zone, was still some way off the mark — as well as then undertake further work but with the entire ship treated as a single zone. However, work completed to this date had already established working specifications and the cost of preparing an EC–2 for lay up by dehumidification — considerably in excess of the oil and grease method — and this information was sufficient for the Division, which had long been an advocate of the old oil and grease method.

In Retrospect

At the time of making the contract, the probability of the tests continuing beyond the six–month period had been acknowledged; it was realised that because of the time required for initial engineering studies, conditioning of the ship for preservation and the installation of the dehumidification systems, there would only be a relatively short time left for the actual operation of the systems. The time limit was set, however, as it seemed advisable to have plans and specifications of a dehumidification system available at a date set no later than that in the contract, even though complete research might better be given more time. Because of the preparatory work approved under the contract, there had only remained two and one–half months for operation of the systems. Nevertheless, within a few days of the expiry of the contract, Todds was required to submit its final report on the study and submit all records to the Commission. The Todd Corporation's offer of a fixed price six-month extension to the contract was rejected.

Examination of the Bottom Coatings on the JOHN STEVEN SON

On May 8, 1946, the vessel was moved to an anchorage in the Hudson River reserve fleet, off Terrytown, New York. During November another move was made, to the site of the reserve fleet off Jones Point. Finally, on June 18, 1947, she was towed to the Ira Bushey Shipyard, Brooklyn, and drydocked the following day. The various paint manufacturers that had supplied test paint coatings had been advised of the drydocking so that representatives could be present if they wished to examine the results.

The Amercoat No.33 coating had broken through in many places — some breaks being due to scuffing, others to weather and marine growth or minute fissures that allowed the water to get under the paint and start the corrosion that lifted and broke the coating. This paint lasted as well as any of the others applied for the same purpose. The Komul No.1 — to all intents and purposes — had failed completely, on both sides of the vessel. This process of deterioration had been noticed to begin as early as four months after application. Amazingly, and considering all that had been claimed for the product, barnacles had already broken through the Navy hot plastic in quite a number of places; at some breaks, corrosion had occurred to the extent that it was beginning to lift the plastic. The coats of bituminous primer, bituminous 70-B enamel and bituminous anti-fouling had also failed completely. Water had seeped behind the compound, loosened it and started corrosion, to the extent that the compound was now breaking off in large sheets. However, no barnacles appeared to have broken through the material. This particular failure appeared to have been due to improper application or unsatisfactory adhering qualities. The failure was such that it was completely scraped off there and then, the area cleaned and wire brushed, and a fresh coat of standard anti-corrosive and anti-fouling paints applied.

The primer and anti-corrosive coats supplied by the four different manufacturers, followed by the coats of Maritime Commission anti-fouling had stood up as well as was expected. The anti-fouling was flaking and barnacles had broken through in many places; the anti-corrosive paints had stood up as well as any material on test — barnacles had

broken through to the metal in a good number of places but, overall, the paints had lasted very well when compared to the others. It was considered that these latter coatings as well as the Amercoat had made the best showing, though not a very good one. [After the initial applications of the paints, several of the vendors had complained that their compounds had been applied under improper temperature conditions; however, to the extent that all applications had been made under the same test conditions, the results were considered comparable.] The JOHN STEVEN SON was refloated the following day, returned to the Hudson River fleet, and simply took its turn for subsequent normal drydocking, cleaning and recoating.

The Final Analysis: Preservation by Dehumidification or by the Oil and Grease Method?

The Division's conservative thinking was based on experience accumulated over a period of years with the WWI reserve fleets. The oil and grease method required that all machinery other than electrical be opened up and either grease or oil applied to all working parts, as well as to boilers, condensers, evaporators, etc. It also required that a vessel's interior itself was completely sprayed with a preservative oil formulated to penetrate rust and scale and inhibit further corrosion. By this method it was necessary to respray interiors every four years. The exterior of the hull above the waterline and superstructure would be sprayed with a mixture of the same oil and of paint, and would require respraying at three-yearly intervals. Windings of all electrical installations would be treated with an insulating fungicidal varnish.

Advocates of the dehumidification method had argued that the oil and grease method would not adequately preserve vessels for the twenty-year period required and had cited costs and repairs involved through poor preservation methods when certain vessels had left the reserve fleet prior to WWII. The Division however maintained that the old US Shipping Board had conducted the earlier preservation programme between 1921 and 1931, then chartering the vessels to operators for varying periods under managing agents. These vessels had been used to a point where repairs and upkeep had inevitably become costly and their efficiency of operation reduced. It was at this point that they had been redelivered and placed in the reserve fleets. The Division's examination of records for the later reconditioning of these vessels had shown that this cost was still comparatively low and not at all solely attributable to their method of preservation. The Division also maintained that during the early 1930s, when a sizeable number of vessels had been placed in the reserve fleet because of the world–wide depression, funds for maintaining the fleets had been curtailed to a point where it had been impossible to properly lay up and preserve them. Nevertheless, a number had been removed from the old reserve fleets prior to WWII and had seen constant use throughout the war and were only now being placed back in reserve. For these reasons, the Division was adamant "... *that vessels that arrive at reserve fleets in good condition and are thoroughly treated with oil and grease will be maintained in a satisfactory condition for the maximum years contemplated for permanent reserve*".

The effectiveness and advantages of dehumidification were not generally disputed within the Commission, but there was not general agreement as to its application to the present ship preservation programme — largely because of the cost factor. Perhaps a further difficulty was that full data from official sources had not been furnished as to the number and types of ships which might be available under each class — particularly the former. Such difficulties produced uncertainties regarding solutions to preservation problems hurriedly requested of the Commission, and there was a natural leaning to the use of methods in vogue after WWI. In a nutshell, a situation had arisen where the merits of dehumidification were fully appreciated but were forgone principally because of drastic post–war reductions in budgets.

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Ibid: Section IV.

Ibid: Section IV of: *Report Covering Preservation Methods Now Under Consideration ...*

Ibid: W.P. Esmond and J.E.P. Grant to USMC via S.D. Schell. January 30, 1946.

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Ibid: A.J. Williams to Todd Shipyards Corporation. May 14, 1948.

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Ibid: F.E. Hickey to C.L. Churchill, Todd Shipyards Corporation. March 29, 1946.

Ibid: C.L. Churchill to F.E. Hickey. March 29, 1946.

Ibid: F.E. Hickey to C.L. Churchill. March 29, 1946.

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# NOTICE OF ANNUAL GENERAL MEETING

*Monday, April 6, at 7.30 pm*

*At the Lotteries Duyfken Shipyard*
*Maritime Museum, Cliff Street, Fremantle.*
*Refreshments will follow. Guests welcome.*

## COMMITTEE

Nominations are called for the positions of President, not more than four Deputy Presidents, Treasurer, Secretary, and not more than four Committee members. Nominations should be in the hands of the Association by Friday, April 3.

MHA COMMITTEE NOMINATION 1998

I nominate:

.....

For the position of:

.....

Signed:

.....

Signature of nominee:

.....

NOTE: Only financial members may vote.

Notifications to: Maritime Heritage Association, c/o 4 Cunningham Street, Applecross WA 6153